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MRM Evaluation Research Program
(NASA Ames Agreement No: NCC 2-1025)
James C. Taylor, Engineering School
Santa Clara University
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To CASI.

IPR11/98: Progress Toward A Maintenance Resource Management Measurement Profile

Executive Summary

This is an interim report on the current output of the MRM evaluation research program. During 1998 this research program has used new and existing data to create an important tool for the development and improvement of "maintenance resource management" (MRM). Thousands of surveys completed by participants in airline MRM training and/or behavior change programs have, for the first time, been consolidated into a panel of "MRM Attitudes and Opinion Profiles." These profiles can be used to compare the attitudes about decision making and communication in any given company at any stage in its MRM program with attitudes of a large sample of like employees during a similar period in their MRM involvement. This panel of comparison profiles for attitudes and opinions is a tool to help audit the effectiveness of a maintenance human factors program. The profile panel is the first of several tools envisioned for applying the information accumulating in MRM databases produced as one of the program's long range objectives. It is described in detail below.

Background

Research activities in the field of "macro" human factors in aviation maintenance since the early 1990s indicate that many airlines have opted to improve communication and professionalism, together with awareness of decision-making, employee participation, and effective safety systems (together called "Maintenance Resource Management," or MRM). Most of these airline MRM efforts have focused on training employees – some emphasizing training mechanics and others training both maintenance management and AMTs. In both cases, the training has succeeded in achieving initial and significant attitude changes among the participants. On the other hand there is little evidence that behavior change follows the initial attitude improvement. An extensive evaluation of the implementation of human factors-safety initiatives indicates that efforts to implement these good ideas and to build on the initial good will have largely stalled.

Support for this research program to evaluate MRM comes from a joint interagency agreement between the National Aviation and Space Administration's (NASA) Ames Research Center (ARC) and the Federal Aviation Administration's (FAA) Office of Aviation Medicine (AAM). This program was conceived in response to a congressionally mandated requirement (Aviation Safety Research Act, Pl.100-591, 1988. The goal of the

MRM evaluation research program is to provide information about organizational effectiveness to help achieve significant reduction of aircraft maintenance accidents and incidents caused by lapses in human communication and coordination. Without such effort, the limitations of human performance, and programs to improve it, will continue to be taxed by an increasingly demanding environment.

This research program is a university-industry-government-labor partnership that involves numerous airline operators, maintenance facilities, universities, research laboratories, and government agencies worldwide. It is planned, integrated, and coordinated with the FAA/NASA Aviation Safety Program (ASP). The research program has earned the reputation of representing the "real world" of aviation maintenance and addressing maintenance human factors issues accordingly. It has raised the awareness of the importance of human factors to the aviation industry, and additionally serves a number of organizations that have introduced MRM programs, some of which have been specifically designed to reduce maintenance errors

Through this partnership, the research program has evaluated, and measured a variety of airline programs to encourage the application and use of open communication and professional behavior to improve safety among aviation maintenance personnel. Most of these airline efforts have focused on training employees – some emphasizing training mechanics and others training both maintenance management and AMTs. A smaller number of programs have attempted to improve communication by initiating structured activities, sometimes accompanied by communication training. In all cases we have employed standardized measures of attitudes, opinions and behaviors to track and evaluate the effects of the programs. Since February 1998 the research program has entered into to its databases some 9,000 surveys completed by MRM training participants. This year's survey data have been, combined with the 19,000 surveys contained in the program's databases from prior years [Taylor, 1997]. This year, for the first time, this combined database has been used to create a template of "typical responses" (i.e., a normative profile) to which any airline or repair station can compare its own workforce at any stage in it's MRM program.

Since 1991 the attitudes, opinion and self-reported intentions and behaviors associated with MRM interventions have been analyzed by our research program. The raw data for that analysis has been provided from time-series surveys conducted by the airlines themselves, using several standardized questionnaire items agreed-to in advance. In our analyses, these questions are used singly or combined into Likert-type scales [Selltiz, et. al. 1976, pp. 418-421] to assess the degree of improvement achieved by the airlines' various MRM programs. Together these items are called the Maintenance Resource Management/Technical Operations Questionnaire (MRM/TOQ). Ideally each airline surveys its MRM participants before an intervention begins for a given sample population ("baseline"), immediately prior to a planned MRM intervention ("pre-"trial), Immediately following the intervention ("post-"trial), as well as various time periods following the intervention ("two-month," "six-month," and "12-month" follow-up surveys). These time-series data points have been previously used only to compare a single airline's results over time. They have now been recombined to yield normative profiles.

Profiles and profile analysis are highly useful ways to study and audit group scores (Kerlinger, 1979, pp 272-274). A profile is a set of scores from a set of measures. Group profiles used here are average scores obtained from a group of scores. The profiles created in the present case can be used by converting scores of the group to be compared or assessed to standard scores – the difference between the individual means for that group and the mean scores in the normative profile for the larger population, suitably adjusted for the variability of the population.

The Normative Profiles

Combining, by each period in the data collection time series, the appropriate responses from all of the companies measured using the MRM/TOQ; and characterizing their statistical properties, provides and prescribes a norm (or standard for comparison) for each time period. The data in each time period thus provides its own profile:

- a "baseline" profile (a comparison standard to use before an intervention begins for a given sample population);
- a "pretrial" profile (a standard for comparison immediately prior to a planned MRM intervention);

- a "post-trial" profile (for comparison of MRM/TOQ results immediately following intervention);
- a "two-month follow-up" profile, as well as "six-month," and "12-month, follow-up" profiles (MRM intervention comparison profiles for responses gathered up to a year afterwards).

In each of the five sections that follow, the population profiles are shown only for a selected subset of the raw data – six attitude and opinion scores from Likert-type scales derived from some 26 individual measures, plus 11 demographic variables. These six scales and 11 demographic variables are presented both as quartile and percentile scores. They are also portrayed in bar charts/histograms with estimates of skewness and kurtosis. Each section contains the profile information for one time period: Baseline, Pretrial, Posttrial, 2 Month Follow-up, and 6 Month Follow-up.

As more data are entered into the database in the coming weeks the 12 month profile will be constructed, and the other five profiles will be augmented.

REFERENCES

Kerlinger, F.N. *Behavioral Research.* New York: Holt, Rinehart and Winston, 1979.

Selltiz, C.; Wrightsman, L.S. & Cook, S.W. *Research methods in Social Relations, Third Edition.* New York: Holt, Rinehart and Winston, 1976.

Taylor, J.C. (1997) *Evaluating the effects of Maintenance Resource Management (MRM) interventions in airline safety* (Annual Report FAA Grant #96-G-003). Los Angeles, CA: Institute of Safety and Systems Management, University of Southern California. (Available electronically, by title, at "hfskyway.com")

MRM Standard Profile
Baseline Survey
11/30/98

Frequencies

Statistics

		SHARE COMMAND RESPONSIBILITY (baseline)	Communication & Coordination (baseline)	Stress Mgt. (baseline)	Assertiveness (baseline)	GROUP GOAL ATTAINMENT (baseline)
N	Valid	2105	2110	2115	2129	2028
	Missing	65	60	55	41	142
Mean		3.1084	4.2111	2.4046	3.2628	2.9443
Median		3.0000	4.2500	2.3333	3.0000	3.0000
Std. Deviation		.8463	.6526	.8788	1.1569	.9061
Minimum		1.00	1.00	1.00	1.00	1.00
Maximum		5.00	5.00	5.00	5.00	5.00
Percentiles	25	2.5000	3.7500	1.6667	2.5000	2.3333
	50	3.0000	4.2500	2.3333	3.0000	3.0000
	75	3.7500	4.7500	3.0000	4.0000	3.6667

Statistics

		SAFETY AWARENESS (baseline)	Gender	Department	Job Title	age category	years of college category
N	Valid	853	2102	2130	2078	1613	1927
	Missing	1317	68	40	92	557	243
Mean		3.6971	1.05	78.81	53.55	2.22	1.70
Median		3.8000	1.00	5.00	70.00	2.00	1.00
Std. Deviation		.8993	.22	169.33	115.78	1.15	1.00
Minimum		1.00	1	1	1	1	1
Maximum		5.00	2	497	999	5	5
Percentiles	25	3.2000	1.00	2.00	2.00	1.00	1.00
	50	3.8000	1.00	5.00	70.00	2.00	1.00
	75	4.4000	1.00	6.00	70.00	3.00	2.00

Statistics

		years in military category	years with other airline category	years of trade school category	years with company category	years in present position category	SHIFT
N	Valid	1948	1903	1855	2108	1625	849
	Missing	222	267	315	62	545	1321
Mean		1.37	1.42	2.26	2.66	1.42	1.74
Median		1.00	1.00	2.00	2.00	1.00	1.00
Std. Deviation		.89	.97	1.14	1.71	.81	.94
Minimum		1	1	1	1	1	1
Maximum		5	5	5	5	5	6
Percentiles	25	1.00	1.00	1.00	1.00	1.00	1.00
	50	1.00	1.00	2.00	2.00	1.00	1.00
	75	1.00	1.00	3.00	4.00	2.00	2.00

Frequency Table

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1991	91.8	94.7	94.7
	2	111	5.1	5.3	100.0
	Total	2102	96.9	100.0	
Missing	8	1	.0		
	9	66	3.0		
	System	1	.0		
	Total	68	3.1		
Total		2170	100.0		

Department

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Line Mtc	510	23.5	23.9	23.9
	Base Mtc	197	9.1	9.2	33.2
	Quality Control	139	6.4	6.5	39.7
	Planning	119	5.5	5.6	45.3
	Shops	559	25.8	26.2	71.5
	Material Services	86	4.0	4.0	75.6
	Engineering	87	4.0	4.1	79.7
	Other	32	1.5	1.5	81.2
	9	48	2.2	2.3	83.4
	230	1	.0	.0	83.5
	319	1	.0	.0	83.5
	Fleet Mgt.	3	.1	.1	83.7
	Engineering	7	.3	.3	84.0
	406	1	.0	.0	84.0
	Mx Training	3	.1	.1	84.2
	408	1	.0	.0	84.2
	Engine Inspec	3	.1	.1	84.4
	Heavy Mx Inspec	9	.4	.4	84.8
	414	1	.0	.0	84.8
	422	1	.0	.0	84.9
	Stores	16	.7	.8	85.6
	Tool Room	2	.1	.1	85.7
	428	1	.0	.0	85.8
	Heavy Mx Planning	7	.3	.3	86.1
	430	1	.0	.0	86.2
	A/F Overhaul	76	3.5	3.6	89.7
	Sheet Metal Shop	13	.6	.6	90.3
	Trim Shop	2	.1	.1	90.4
	Seat Shop	5	.2	.2	90.7

Department

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	435	1	.0	.0	90.7
	Engine Shop	11	.5	.5	91.2
	Engine Assy	3	.1	.1	91.4
	PIT Machine Shop	4	.2	.2	91.5
	457	1	.0	.0	91.6
	APU Shop	2	.1	.1	91.7
	460	1	.0	.0	91.7
	461	1	.0	.0	91.8
	Machine Shop	5	.2	.2	92.0
	Avionics Shop	7	.3	.3	92.3
	Instrument Shop	3	.1	.1	92.5
	Elect Shop	2	.1	.1	92.6
	473	1	.0	.0	92.6
	Wheel&Brake Shop	6	.3	.3	92.9
	Composites Shop	3	.1	.1	93.1
	476	1	.0	.0	93.1
	478	1	.0	.0	93.1
	Plant Mx	29	1.3	1.4	94.5
	Mx Control	3	.1	.1	94.6
	490	1	.0	.0	94.7
	Line Mx	86	4.0	4.0	98.7
	Mx Check Crews	4	.2	.2	98.9
	GSE Shop	22	1.0	1.0	100.0
	497	1	.0	.0	100.0
	Total	2130	98.2	100.0	
Missing	888	29	1.3		
	999	10	.5		
	System	1	.0		
	Total	40	1.8		
Total		2170	100.0		

Job Title

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Supervisor	229	10.6	11.0	11.0
	Assistant Sup	332	15.3	16.0	27.0
	Manager	84	3.9	4.0	31.0
	Director	35	1.6	1.7	32.7
	Engineer	61	2.8	2.9	35.7
	Planner	50	2.3	2.4	38.1
	Instructor	15	.7	.7	38.8
	8	1	.0	.0	38.8
	Matl Coordinator	37	1.7	1.8	40.6

Job Title

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Analyst	5	.2	.2	40.9
	11	2	.1	.1	41.0
	12	1	.0	.0	41.0
	13	1	.0	.0	41.0
	14	2	.1	.1	41.1
	15	8	.4	.4	41.5
	16	1	.0	.0	41.6
	17	1	.0	.0	41.6
	18	12	.6	.6	42.2
	19	1	.0	.0	42.3
	Mx Control Supervisor	6	.3	.3	42.5
	Quality Auditor	10	.5	.5	43.0
	22	7	.3	.3	43.4
	23	1	.0	.0	43.4
	24	1	.0	.0	43.5
	25	7	.3	.3	43.8
	26	1	.0	.0	43.8
	27	1	.0	.0	43.9
	28	3	.1	.1	44.0
	29	1	.0	.0	44.1
	30	2	.1	.1	44.2
	31	1	.0	.0	44.2
	32	3	.1	.1	44.4
	33	1	.0	.0	44.4
	34	1	.0	.0	44.5
	35	15	.7	.7	45.2
	36	1	.0	.0	45.2
	37	3	.1	.1	45.4
	38	1	.0	.0	45.4
	Specialist	3	.1	.1	45.6
	40	2	.1	.1	45.7
	41	1	.0	.0	45.7
	42	2	.1	.1	45.8
	43	1	.0	.0	45.9
	44	1	.0	.0	45.9
	45	1	.0	.0	46.0
	Mx Representative	11	.5	.5	46.5
	47	1	.0	.0	46.5
	48	1	.0	.0	46.6
	49	3	.1	.1	46.7
	Scheduler	12	.6	.6	47.3
	51	8	.4	.4	47.7
	52	1	.0	.0	47.7
	53	1	.0	.0	47.8
	54	1	.0	.0	47.8

Job Title

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	55	1	.0	.0	47.9
	56	2	.1	.1	48.0
	57	1	.0	.0	48.0
	Coordinator	16	.7	.8	48.8
	59	1	.0	.0	48.8
	Quality Assurance	1	.0	.0	48.9
	61	1	.0	.0	48.9
	62	1	.0	.0	49.0
	63	1	.0	.0	49.0
	64	4	.2	.2	49.2
	65	2	.1	.1	49.3
	66	1	.0	.0	49.4
	67	1	.0	.0	49.4
	68	1	.0	0	49.5
	69	2	.1	.1	49.6
	Mechanic	892	41.1	42.9	92.5
	Inspector	37	1.7	1.8	94.3
	Clerk	33	1.5	1.6	95.9
	73	1	.0	.0	95.9
	74	2	.1	.1	96.0
	75	1	.0	.0	96.1
	76	1	.0	.0	96.1
	77	1	.0	.0	96.2
	78	1	.0	.0	96.2
	79	1	.0	.0	96.2
	80	1	.0	.0	96.3
	Storekeeper	3	.1	.1	96.4
	Cleaner	6	.3	.3	96.7
	Station Mx Controller	1	.0	.0	96.8
	Utility	35	1.6	1.7	98.5
	888	17	.8	.8	99.3
	999	15	.7	.7	100.0
	Total	2078	95.8	100.0	
Missing	Other	16	.7		
	99	75	3.5		
	System	1	.0		
	Total	92	4.2		
Total		2170	100.0		

age category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	under 30	595	27.4	36.9	36.9
	between 30 and 40	378	17.4	23.4	60.3
	between 40 and 50	364	16.8	22.6	82.9
	between 50 and 60	247	11.4	15.3	98.2
	over 60	29	1.3	1.8	100.0
	Total	1613	74.3	100.0	
Missing	System	557	25.7		
Total		2170	100.0		

years of college category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1.6	1115	51.4	57.9	57.9
	between 1.6 and 3.1	449	20.7	23.3	81.2
	between 3.2 and 4.7	230	10.6	11.9	93.1
	between 4.8 and 6.3	88	4.1	4.6	97.7
	between 6.4 and 8	45	2.1	2.3	100.0
	Total	1927	88.8	100.0	
Missing	System	243	11.2		
Total		2170	100.0		

years in military category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 6	1589	73.2	81.6	81.6
	between 6 and 11	139	6.4	7.1	88.7
	between 12 and 17	114	5.3	5.9	94.6
	between 18 and 23	69	3.2	3.5	98.1
	between 24 and 34	37	1.7	1.9	100.0
	Total	1948	89.8	100.0	
Missing	System	222	10.2		
Total		2170	100.0		

years with other airline category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 6	1515	69.8	79.6	79.6
	between 6 and 11	162	7.5	8.5	88.1
	between 12 and 17	91	4.2	4.8	92.9
	between 18 and 24	80	3.7	4.2	97.1
	between 24 and 34	55	2.5	2.9	100.0
	Total	1903	87.7	100.0	
Missing	System	267	12.3		
Total		2170	100.0		

years of trade school category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1	685	31.6	36.9	36.9
	between 1 and 2	263	12.1	14.2	51.1
	between 2 and 3	727	33.5	39.2	90.3
	between 3 and 4	99	4.6	5.3	95.6
	betwen 4 and 6	81	3.7	4.4	100.0
	Total	1855	85.5	100.0	
Missing	System	315	14.5		
Total		2170	100.0		

years with company category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	968	44.6	45.9	45.9
	2	154	7.1	7.3	53.2
	3	125	5.8	5.9	59.2
	4	358	16.5	17.0	76.1
	5	503	23.2	23.9	100.0
	Total	2108	97.1	100.0	
Missing	System	62	2.9		
Total		2170	100.0		

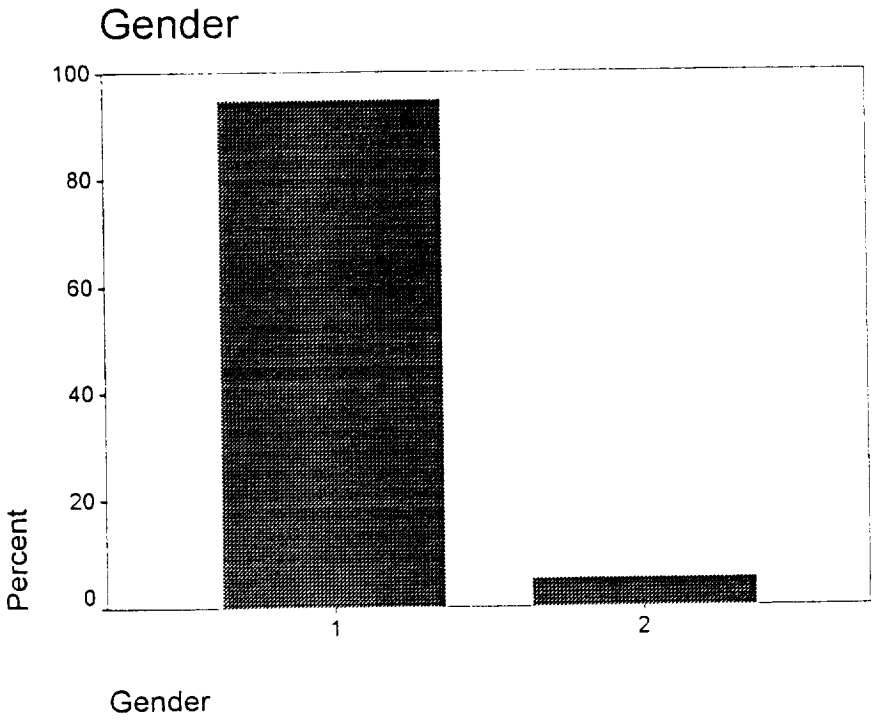
years in present position category

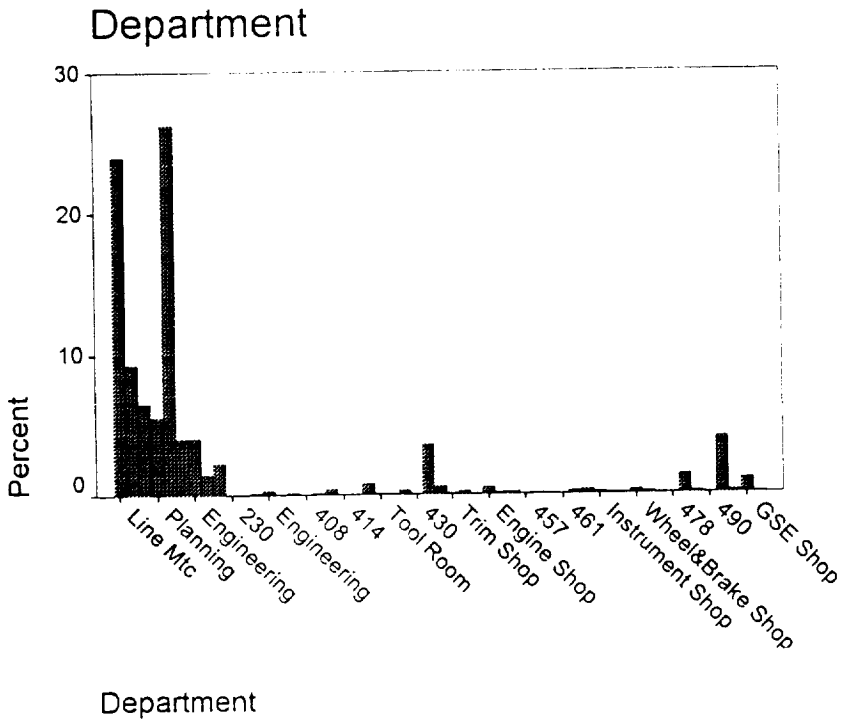
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	between 0 and 6.9 years	1168	53.8	71.9	71.9
	between 7 and 12.9 years	329	15.2	20.2	92.1
	between 13 and 18.9 years	63	2.9	3.9	96.0
	between 19 and 24.9 years	40	1.8	2.5	98.5
	between 25 and 30.9 years	25	1.2	1.5	100.0
	Total	1625	74.9	100.0	
Missing	System	545	25.1		
Total		2170	100.0		

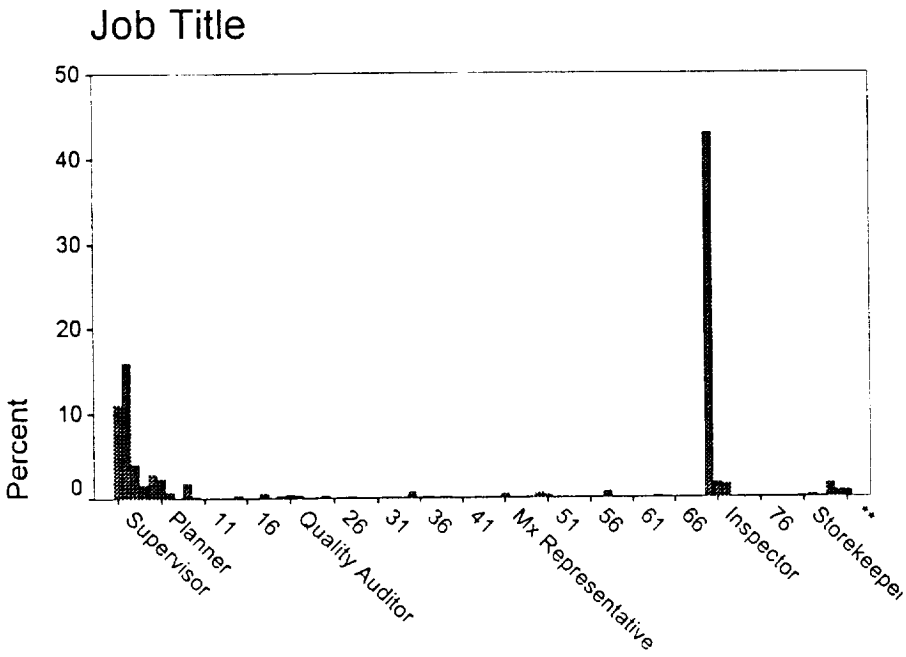
SHIFT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Days	444	20.5	52.3	52.3
	Afternoons	234	10.8	27.6	79.9
	Nights	135	6.2	15.9	95.8
	Early Afternoons	21	1.0	2.5	98.2
	RDO	13	.6	1.5	99.8
	Early Days	2	.1	.2	100.0
	Total	849	39.1	100.0	
Missing	8	11	.5		
	9	32	1.5		
	System	1278	58.9		
	Total	1321	60.9		
Total		2170	100.0		

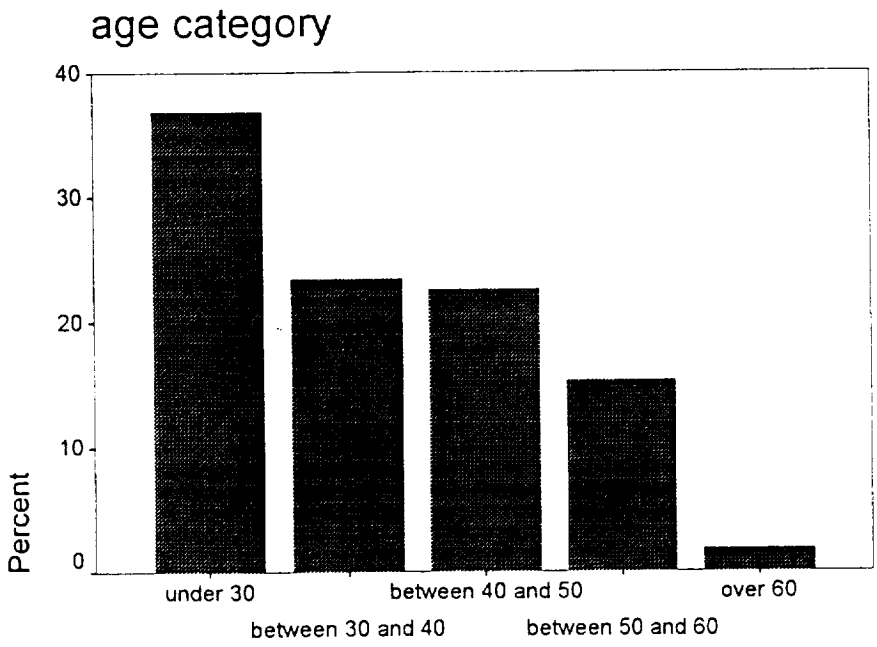
Bar Chart


Gender
100
80
60
40
20
0
Percent
1
2
Gender

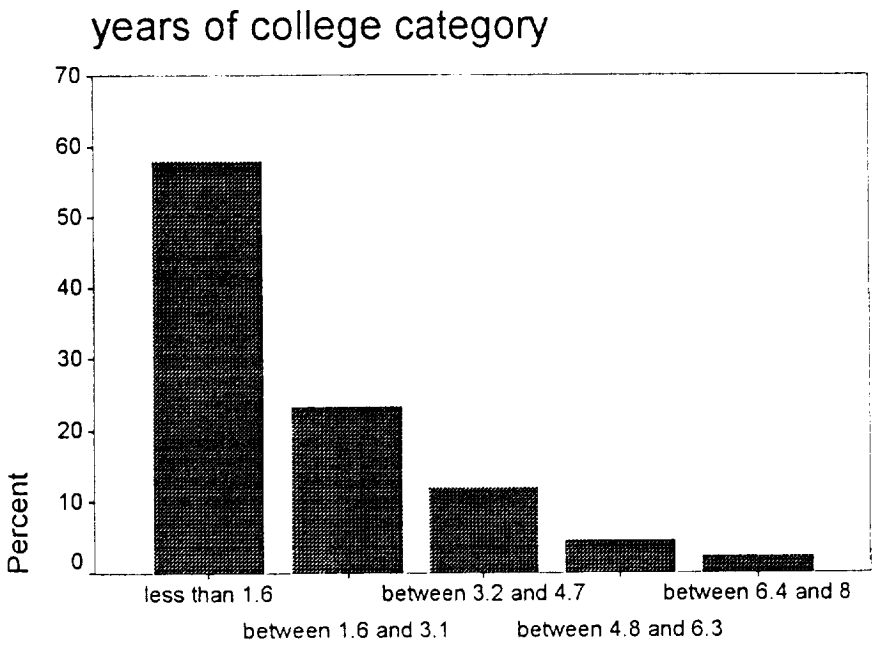

Department
30
20
10
0
Percent
Line Mtc
Planning
Engineering
230
Engineering
408
414
Tool Room
430
Trim Shop
Engine Shop
457
461
Instrument Shop
Wheel&Brake Shop
478
490
GSE Shop
Department



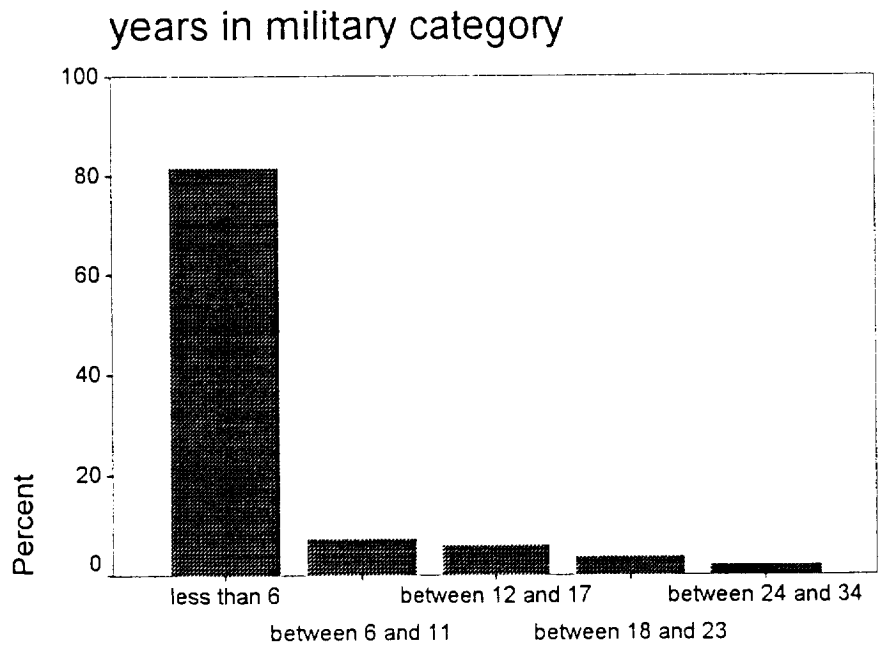
Job Title



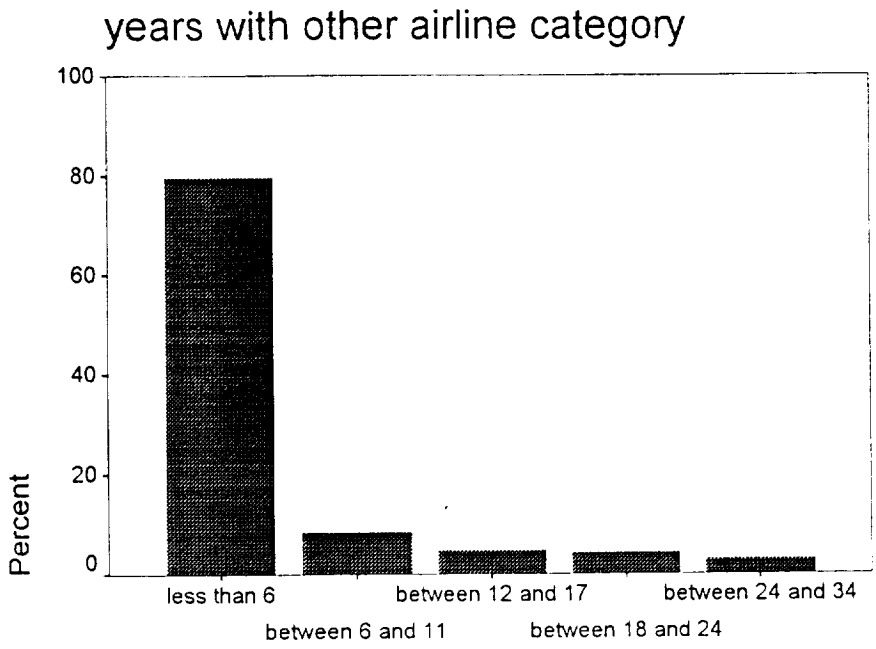
age category



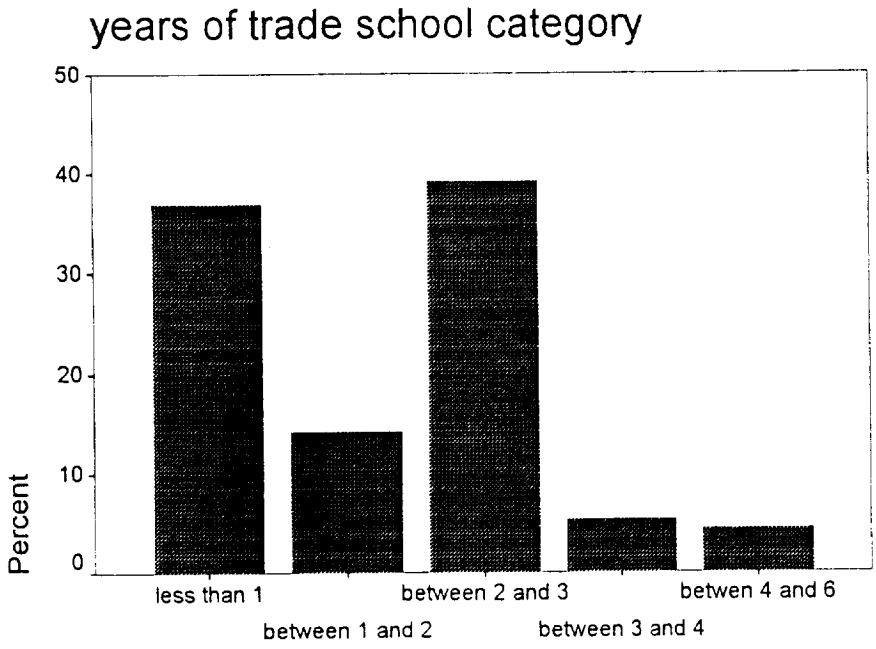
years of college category



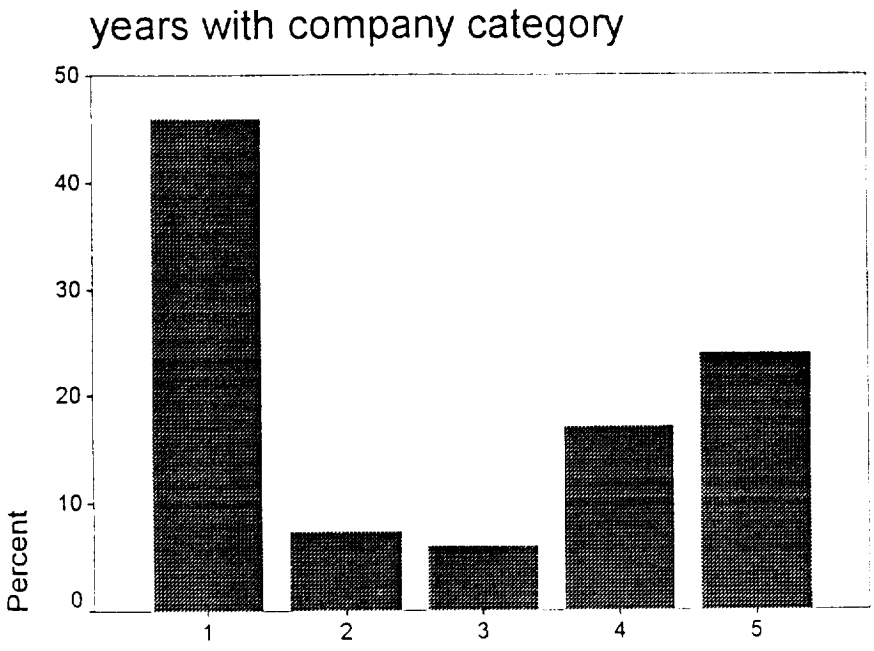
years in military category



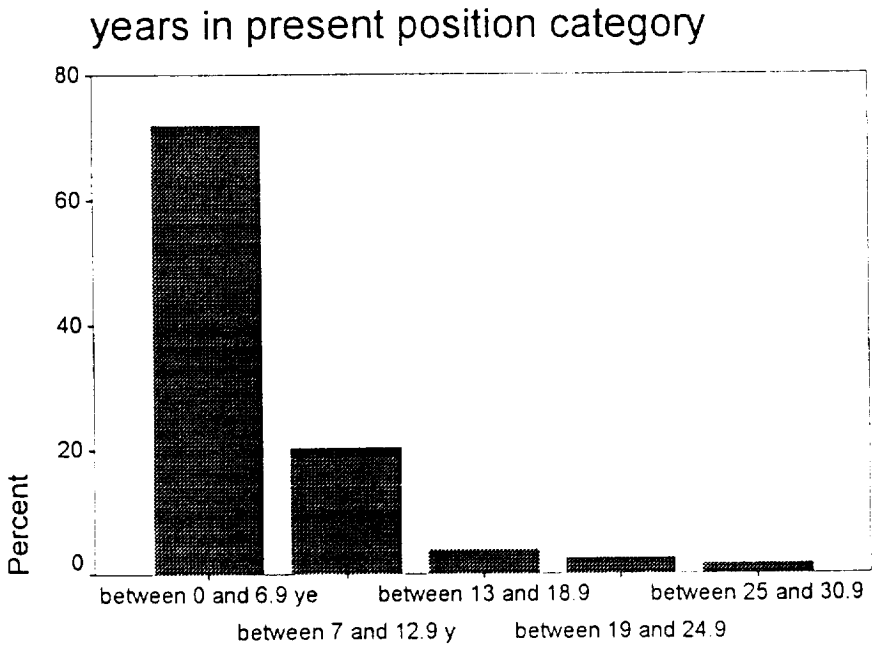
years with other airline category



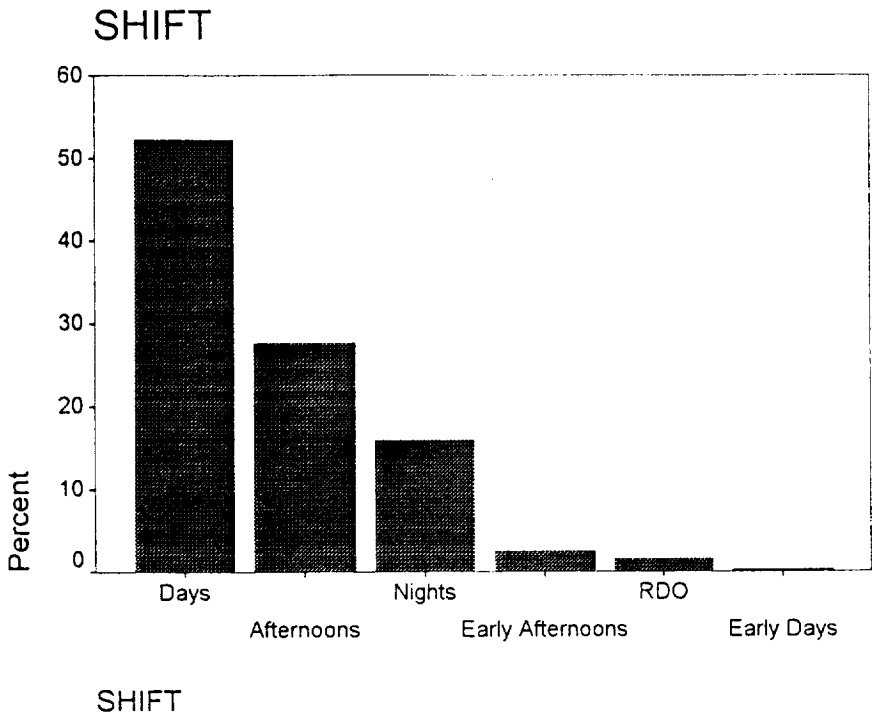
years of trade school category



years with company category



years in present position category


SHIFT
60
50
40
30
20
10
0
Percent
Days
Afternoons
Nights
Early Afternoons
RDO
Early Days
SHIFT

Frequencies

Statistics

		Communication & Coordination (baseline)	Stress Mgt. (baseline)	Assertiveness (baseline)	GROUP GOAL ATTAINMENT (baseline)
N	Valid	2110	2115	2129	2028
	Missing	60	55	41	142
Mean		4.2111	2.4046	3.2628	2.9443
Median		4.2500	2.3333	3.0000	3.0000
Std. Deviation		.6526	.8788	1.1569	.9061
Skewness		-1.032	.483	-.226	-.015
Std. Error of Skewness		.053	.053	.053	.054
Kurtosis		1.523	-.113	-.882	-.529
Std. Error of Kurtosis		.107	.106	.106	.109
Percentiles	10	3.2500	1.3333	1.5000	1.6667
	20	3.7500	1.6667	2.0000	2.1667
	30	4.0000	2.0000	2.5000	2.5000
	40	4.2500	2.0000	3.0000	2.6667
	50	4.2500	2.3333	3.0000	3.0000
	60	4.5000	2.6667	3.5000	3.1667
	70	4.7500	2.6667	4.0000	3.5000
	80	4.7500	3.0000	4.5000	3.6667
	90	5.0000	3.6667	5.0000	4.1667

Statistics

		SAFETY AWARENESS (baseline)	SHARE COMMAND RESPONSIBILITY (baseline)
N	Valid	853	2105
	Missing	1317	65
Mean		3.6971	3.1084
Median		3.8000	3.0000
Std. Deviation		.8993	.8463
Skewness		-.532	-.016
Std. Error of Skewness		.084	.053
Kurtosis		-.305	-.247
Std. Error of Kurtosis		.167	.107
Percentiles	10	2.4000	2.0000
	20	3.0000	2.5000
	30	3.2000	2.7500
	40	3.6000	3.0000
	50	3.8000	3.0000
	60	4.0000	3.2500
	70	4.3600	3.5000
	80	4.6000	3.7500
	90	4.8000	4.2500

Frequency Table

Communication & Coordination (baseline)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	5	.2	.2	.2
	1.50	1	.0	.0	.3
	1.75	4	.2	.2	.5
	2.00	6	.3	.3	.8
	2.25	11	.5	.5	1.3
	2.50	16	.7	.8	2.0
	2.75	23	1.1	1.1	3.1
	3.00	78	3.6	3.7	6.8
	3.25	80	3.7	3.8	10.6
	3.50	154	7.1	7.3	17.9
	3.75	176	8.1	8.3	26.3
	4.00	272	12.5	12.9	39.1
	4.25	304	14.0	14.4	53.6
	4.50	330	15.2	15.6	69.2
	4.75	304	14.0	14.4	83.6
	5.00	346	15.9	16.4	100.0
	Total	2110	97.2	100.0	
Missing	System	60	2.8		
Total		2170	100.0		

Stress Mgt. (baseline)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	146	6.7	6.9	6.9
	1.33	218	10.0	10.3	17.2
	1.67	217	10.0	10.3	27.5
	2.00	294	13.5	13.9	41.4
	2.33	356	16.4	16.8	58.2
	2.67	271	12.5	12.8	71.0
	3.00	212	9.8	10.0	81.0
	3.33	151	7.0	7.1	88.2
	3.67	117	5.4	5.5	93.7
	4.00	53	2.4	2.5	96.2
	4.33	40	1.8	1.9	98.1
	4.67	23	1.1	1.1	99.2
	5.00	17	.8	.8	100.0
	Total	2115	97.5	100.0	
Missing	System	55	2.5		
Total		2170	100.0		

Assertiveness (baseline)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	121	5.6	5.7	5.7
	1.50	138	6.4	6.5	12.2
	2.00	204	9.4	9.6	21.7
	2.50	205	9.4	9.6	31.4
	3.00	405	18.7	19.0	50.4
	3.50	231	10.6	10.9	61.2
	4.00	329	15.2	15.5	76.7
	4.50	243	11.2	11.4	88.1
	5.00	253	11.7	11.9	100.0
	Total	2129	98.1	100.0	
Missing	System	41	1.9		
Total		2170	100.0		

GROUP GOAL ATTAINMENT (baseline)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	41	1.9	2.0	2.0
	1.17	22	1.0	1.1	3.1
	1.33	38	1.8	1.9	5.0
	1.50	52	2.4	2.6	7.5
	1.67	68	3.1	3.4	10.9
	1.83	66	3.0	3.3	14.2
	2.00	85	3.9	4.2	18.3
	2.17	97	4.5	4.8	23.1
	2.33	126	5.8	6.2	29.3
	2.50	106	4.9	5.2	34.6
	2.67	142	6.5	7.0	41.6
	2.83	126	5.8	6.2	47.8
	3.00	166	7.6	8.2	56.0
	3.17	131	6.0	6.5	62.4
	3.33	125	5.8	6.2	68.6
	3.50	122	5.6	6.0	74.6
	3.67	117	5.4	5.8	80.4
	3.83	90	4.1	4.4	84.8
	4.00	86	4.0	4.2	89.1
	4.17	66	3.0	3.3	92.3
	4.33	56	2.6	2.8	95.1
	4.50	23	1.1	1.1	96.2
	4.67	31	1.4	1.5	97.7
	4.83	23	1.1	1.1	98.9
	5.00	23	1.1	1.1	100.0
	Total	2028	93.5	100.0	
Missing	System	142	6.5		
Total		2170	100.0		

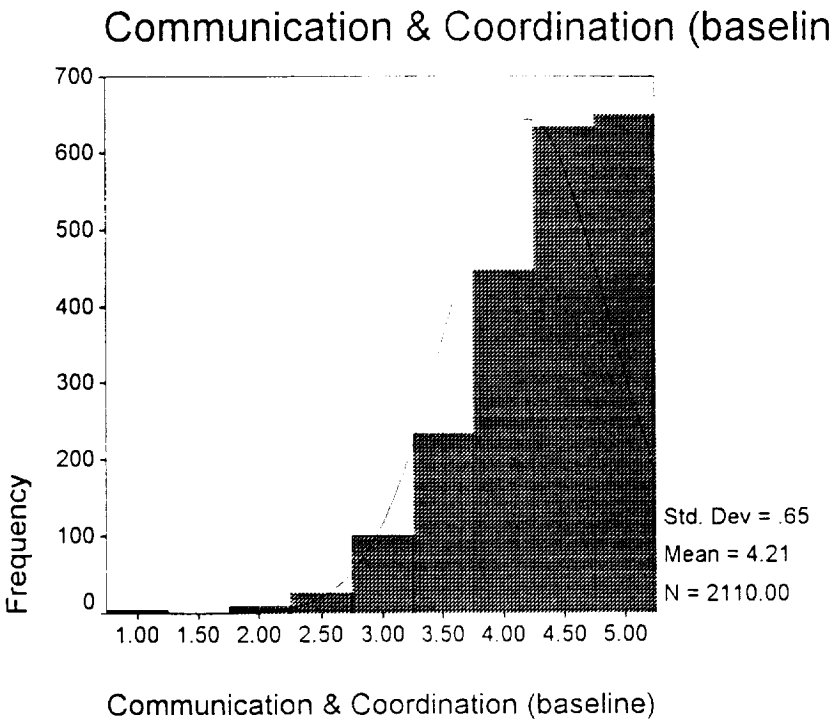
SAFETY AWARENESS (baseline)

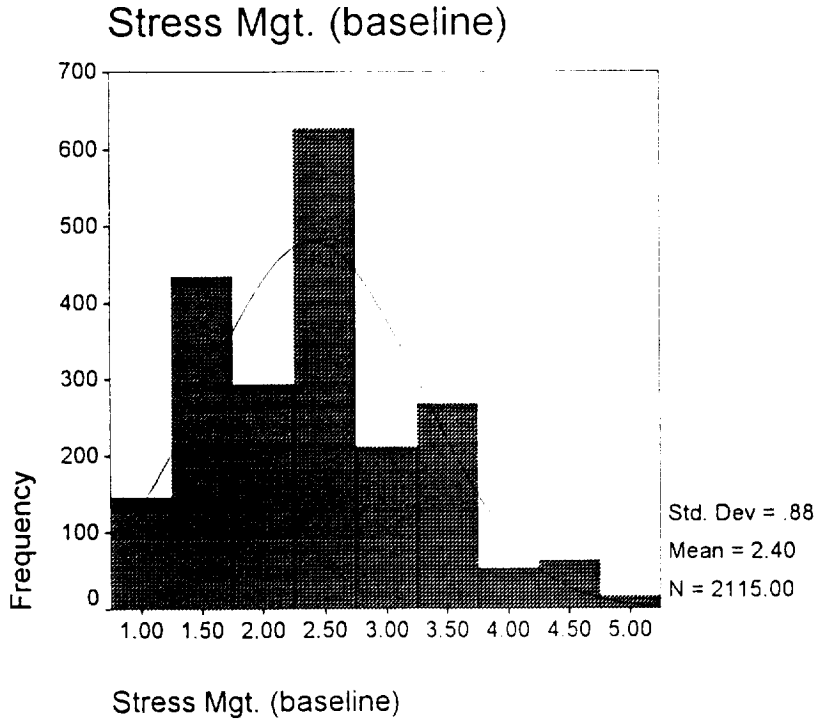
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	2	.1	.2	.2
	1.20	5	.2	.6	.8
	1.40	7	.3	.8	1.6
	1.60	4	.2	.5	2.1
	1.80	16	.7	1.9	4.0
	2.00	11	.5	1.3	5.3
	2.20	28	1.3	3.3	8.6
	2.40	23	1.1	2.7	11.3
	2.60	29	1.3	3.4	14.7
	2.80	35	1.6	4.1	18.8
	3.00	47	2.2	5.5	24.3
	3.20	56	2.6	6.6	30.8
	3.40	67	3.1	7.9	38.7
	3.60	75	3.5	8.8	47.5
	3.80	67	3.1	7.9	55.3
	4.00	55	2.5	6.4	61.8
	4.20	70	3.2	8.2	70.0
	4.40	72	3.3	8.4	78.4
	4.60	57	2.6	6.7	85.1
	4.80	61	2.8	7.2	92.3
	5.00	66	3.0	7.7	100.0
	Total	853	39.3	100.0	
Missing	System	1317	60.7		
Total		2170	100.0		

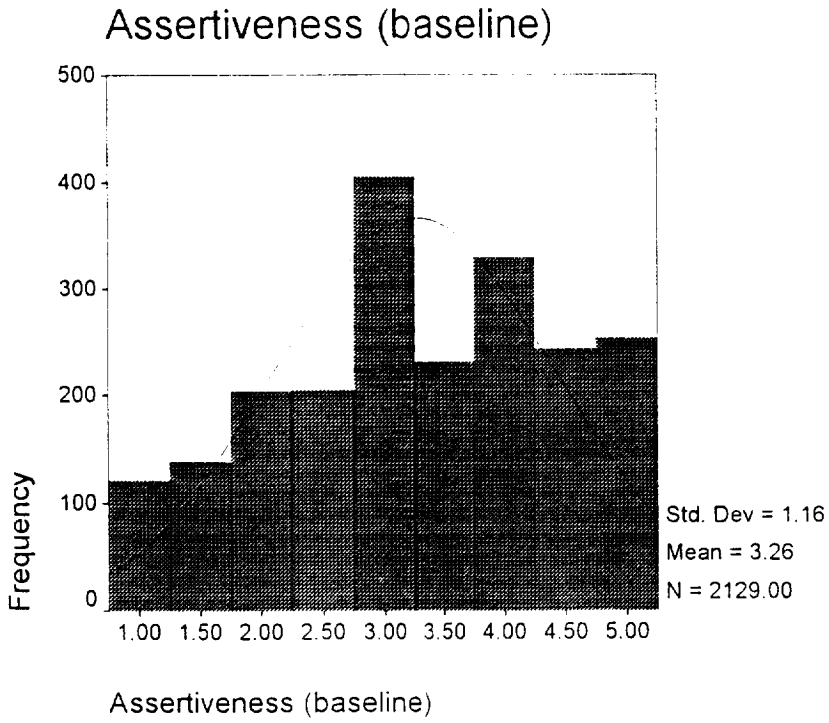
SHARE COMMAND RESPONSIBILITY (baseline)

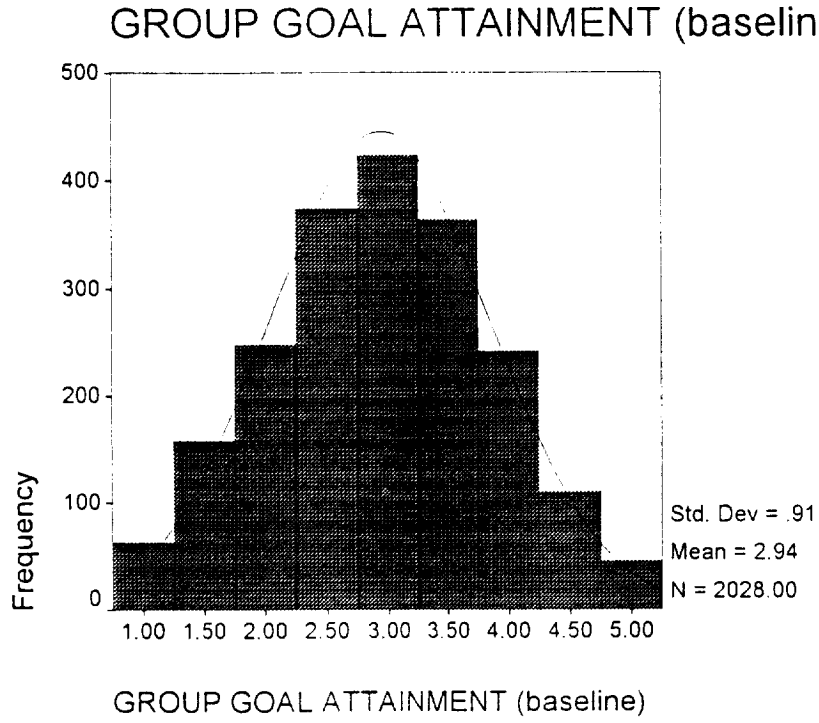
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	27	1.2	1.3	1.3
	1.25	19	.9	.9	2.2
	1.50	36	1.7	1.7	3.9
	1.75	70	3.2	3.3	7.2
	2.00	121	5.6	5.7	13.0
	2.25	138	6.4	6.6	19.5
	2.50	178	8.2	8.5	28.0
	2.75	204	9.4	9.7	37.7
	3.00	301	13.9	14.3	52.0
	3.25	224	10.3	10.6	62.6
	3.50	228	10.5	10.8	73.4
	3.75	168	7.7	8.0	81.4
	4.00	149	6.9	7.1	88.5
	4.25	85	3.9	4.0	92.5
	4.50	64	2.9	3.0	95.6
	4.75	47	2.2	2.2	97.8
	5.00	46	2.1	2.2	100.0
	Total	2105	97.0	100.0	
Missing	System	65	3.0		
Total		2170	100.0		

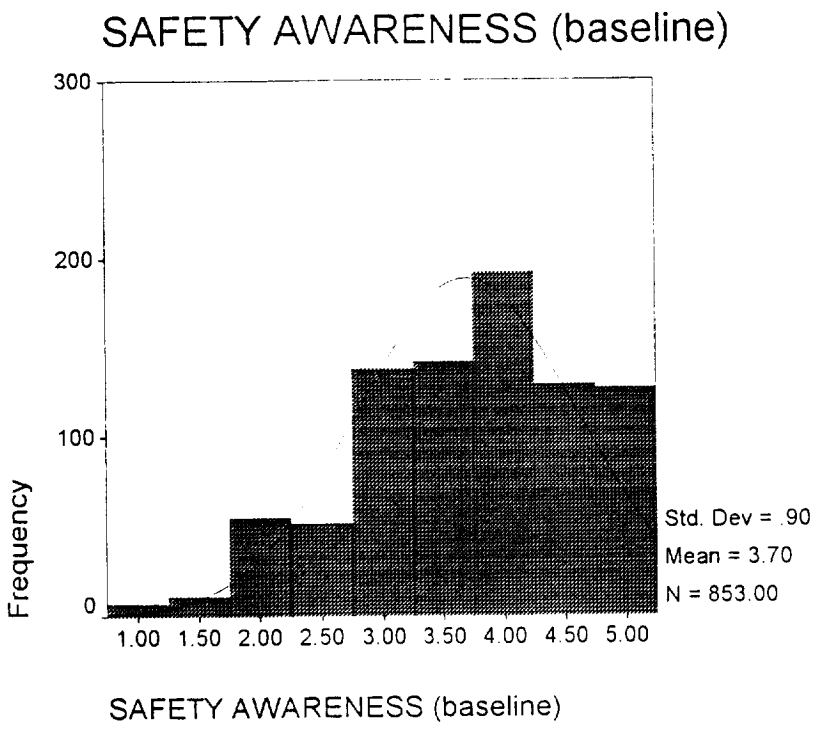
Histogram

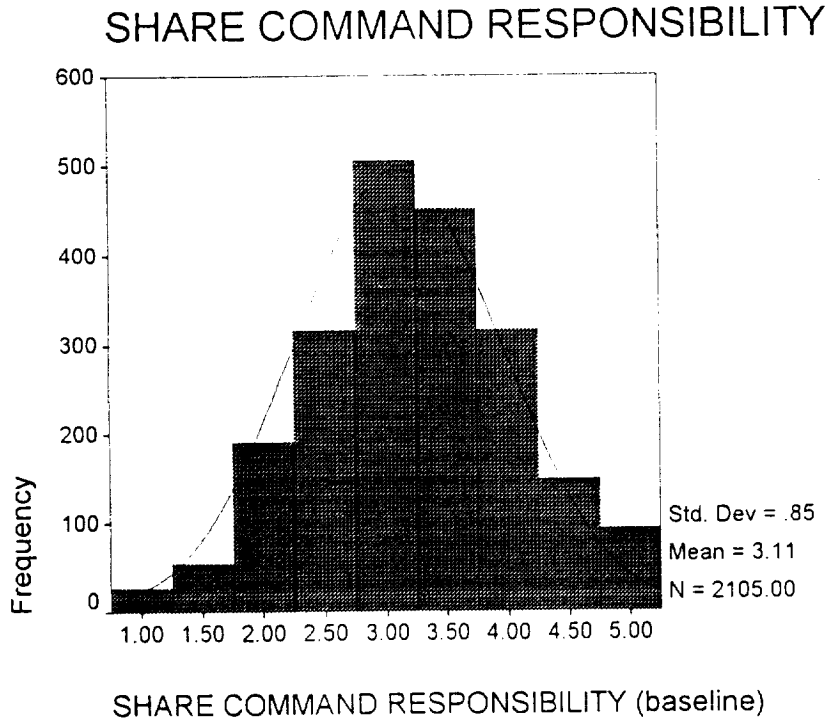

Communication & Coordination (baseline)
Frequency
700
600
500
400
300
200
100
0
1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00
Std. Dev = .65
Mean = 4.21
N = 2110.00
Communication & Coordination (baseline)


Stress Mgt. (baseline)
Frequency
700
600
500
400
300
200
100
0
1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00
Std. Dev = .88
Mean = 2.40
N = 2115.00
Stress Mgt. (baseline)


Assertiveness (baseline)
Frequency
500
400
300
200
100
0
1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00
Std. Dev = 1.16
Mean = 3.26
N = 2129.00
Assertiveness (baseline)


GROUP GOAL ATTAINMENT (baseline)
Frequency
500
400
300
200
100
0
1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00
Std. Dev = .91
Mean = 2.94
N = 2028.00
GROUP GOAL ATTAINMENT (baseline)


SAFETY AWARENESS (baseline)
300
200
100
0
Frequency
1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00
Std. Dev = .90
Mean = 3.70
N = 853.00
SAFETY AWARENESS (baseline)


SHARE COMMAND RESPONSIBILITY (bas
600
500
400
300
200
100
0
Frequency
1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00
Std. Dev = .85
Mean = 3.11
N = 2105.00
SHARE COMMAND RESPONSIBILITY (baseline)

MRM Standard Profile
Pre-training Survey
11/30/98

Frequencies

Statistics

		Share Command Responsibility (pre)	Communication & Coordination (pre)	Recognize Stress Effects (pre)	Assertiveness (pre)	Group Goal Attainment (pre)
N	Valid	8695	8704	8727	8790	8506
	Missing	142	133	110	47	331
Mean		3.1655	4.1725	2.6659	3.2096	3.0911
Median		3.2500	4.2500	2.6667	3.0000	3.1667
Std. Deviation		.8523	.6673	.8831	1.1235	.8943
Minimum		1.00	1.00	1.00	1.00	1.00
Maximum		5.00	5.00	5.00	5.00	5.00
Percentiles	25	2.5000	3.7500	2.0000	2.5000	2.5000
	50	3.2500	4.2500	2.6667	3.0000	3.1667
	75	3.7500	4.7500	3.3333	4.0000	3.6667

Statistics

		Safety Climate (pre)	Gender	Department	Job Title	age category	years of college category
N	Valid	6621	8351	6872	8366	7784	6867
	Missing	2216	486	1965	471	1053	1970
Mean		3.6424	1.07	40.69	53.78	4.02	2.32
Median		3.8000	1.00	2.00	70.00	4.00	2.00
Std. Deviation		.8428	.25	135.83	29.95	.93	1.51
Minimum		1.00	1	1	1	1	1
Maximum		5.00	2	999	99	5	5
Percentiles	25	3.0000	1.00	1.00	18.50	3.00	1.00
	50	3.8000	1.00	2.00	70.00	4.00	2.00
	75	4.2000	1.00	5.00	70.00	5.00	3.00

Statistics

		years in military category	years with other airline category	years of trade school category	years with company category	years in current position category	Shift
N	Valid	7285	7127	6785	7912	8335	6657
	Missing	1552	1710	2052	925	502	2180
Mean		1.90	1.79	2.07	4.00	3.23	2.05
Median		1.00	1.00	2.00	4.00	4.00	2.00
Std. Deviation		1.25	1.34	1.18	1.18	1.55	1.10
Minimum		1	1	1	1	1	1
Maximum		5	5	5	5	5	6
Percentiles	25	1.00	1.00	1.00	4.00	1.00	1.00
	50	1.00	1.00	2.00	4.00	4.00	2.00
	75	3.00	2.00	3.00	5.00	5.00	3.00

Frequency Table

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	7778	88.0	93.1	93.1
	female	573	6.5	6.9	100.0
	Total	8351	94.5	100.0	
Missing	8	6	.1		
	9	478	5.4		
	System	2	.0		
	Total	486	5.5		
Total		8837	100.0		

Department

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Line mtc	2695	30.5	39.2	39.2
	Base mtc	1944	22.0	28.3	67.5
	Quality control	238	2.7	3.5	71.0
	Planning	161	1.8	2.3	73.3
	Shop	520	5.9	7.6	80.9
	Matl.Services	559	6.3	8.1	89.0
	Engineering	230	2.6	3.3	92.4
	206	1	.0	.0	92.4
	227	2	.0	.0	92.4
	265	4	.0	.1	92.5
	277	1	.0	0	92.5
	406	1	.0	.0	92.5
	411	1	.0	.0	92.5
	419	1	.0	.0	92.5
	425	16	.2	.2	92.8
	431	1	.0	.0	92.8
	475	1	.0	.0	92.8
	485	1	.0	.0	92.8
	491	395	4.5	5.7	98.5
	494	80	.9	1.2	99.7
	496	1	.0	.0	99.7
	888	2	.0	.0	99.8
	999	17	.2	.2	100.0
	Total	6872	77.8	100.0	
Missing	other	456	5.2		
	missing	517	5.9		
	System	992	11.2		
	Total	1965	22.2		
Total		8837	100.0		

Job Title

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Supervisor	411	4.7	4.9	4.9
	Assistant Sup	1044	11.8	12.5	17.4
	Manager	153	1.7	1.8	19.2
	Director	49	.6	.6	19.8
	Engineer	149	1.7	1.8	21.6
	Planner	142	1.6	1.7	23.3
	Instructor	31	.4	.4	23.7
	8	1	.0	.0	23.7
	Matl Coordinator	64	.7	.8	24.4
	Analyst	45	.5	.5	25.0
	Spec.Projects	1	.0	.0	25.0
	Tool Logistics	1	.0	.0	25.0
	Mx Control Supervisor	3	.0	.0	25.0
	Quality Auditor	13	.1	.2	25.2
	Training Supervisor	2	.0	.0	25.2
	Tech Writer	8	.1	.1	25.3
	Exec.Scy	3	.0	.0	25.3
	Specialist	48	.5	.6	25.9
	Mx Representative	23	.3	.3	26.2
	Scheduler	39	.4	.5	26.7
	57	1	.0	.0	26.7
	Coordinator	63	.7	.8	27.4
	Quality Assurance	3	.0	.0	27.5
	Tech Asst.	10	.1	.1	27.6
	69	5	.1	.1	27.6
	Mechanic	5105	57.8	61.0	88.7
	Inspector	186	2.1	2.2	90.9
	Clerk	26	.3	.3	91.2
	Warranty	2	.0	.0	91.2
	Purchasing	2	.0	.0	91.2
	Auditor	2	.0	.0	91.3
	76	1	.0	.0	91.3
	Tech Illustrator	2	.0	.0	91.3
	78	2	.0	.0	91.3
	79	9	.1	.1	91.4
	80	6	.1	.1	91.5
	Storekeeper	366	4.1	4.4	95.9
	Cleaner	130	1.5	1.6	97.4
	Station Mx Controller	3	.0	.0	97.5
	Ramp Serviceman	7	.1	.1	97.5
	Team Coordinator	15	.2	.2	97.7
	86	170	1.9	2.0	99.8
	Tool Maintenance	4	.0	.0	99.8
	88	1	.0	.0	99.8
	99	15	.2	.2	100.0

Job Title

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Total	8366	94.7	100.0	
Missing	888	109	1.2		
	999	357	4.0		
	System	5	.1		
	Total	471	5.3		
Total		8837	100.0		

age category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 25	85	1.0	1.1	1.1
	over 25, less than 30	451	5.1	5.8	6.9
	over 30, less than 35	1439	16.3	18.5	25.4
	over 35, less than 45	3019	34.2	38.8	64.2
	over 45	2790	31.6	35.8	100.0
	Total	7784	88.1	100.0	
Missing	System	1053	11.9		
Total		8837	100.0		

years of college category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1	3390	38.4	49.4	49.4
	over 1, less than 2	522	5.9	7.6	57.0
	over 2, less than 3	1377	15.6	20.1	77.0
	over 3, less than 4	503	5.7	7.3	84.3
	over 4	1075	12.2	15.7	100.0
	Total	6867	77.7	100.0	
Missing	System	1970	22.3		
Total		8837	100.0		

years in military category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1	4395	49.7	60.3	60.3
	over 1, less than 4	582	6.6	8.0	68.3
	over 4, less than 6	1390	15.7	19.1	87.4
	over 6, less than 10	501	5.7	6.9	94.3
	over 10	417	4.7	5.7	100.0
	Total	7285	82.4	100.0	
Missing	System	1552	17.6		
Total		8837	100.0		

years with other airline category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1	4847	54.8	68.0	68.0
	over 1, less than 3	736	8.3	10.3	78.3
	over 3, less than 5	406	4.6	5.7	84.0
	over 5, less than 10	482	5.5	6.8	90.8
	over 10	656	7.4	9.2	100.0
	Total	7127	80.6	100.0	
Missing	System	1710	19.4		
Total		8837	100.0		

years of trade school category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1	3262	36.9	48.1	48.1
	over 1, less than 2	732	8.3	10.8	58.9
	over 2, less than 3	2180	24.7	32.1	91.0
	over 3, less than 4	304	3.4	4.5	95.5
	over 4	307	3.5	4.5	100.0
	Total	6785	76.8	100.0	
Missing	System	2052	23.2		
Total		8837	100.0		

years with company category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1	528	6.0	6.7	6.7
	over 1, less than 3	608	6.9	7.7	14.4
	over 3, less than 5	476	5.4	6.0	20.4
	over 5 less than 10	3023	34.2	38.2	58.6
	over 10	3277	37.1	41.4	100.0
	Total	7912	89.5	100.0	
Missing	System	925	10.5		
Total		8837	100.0		

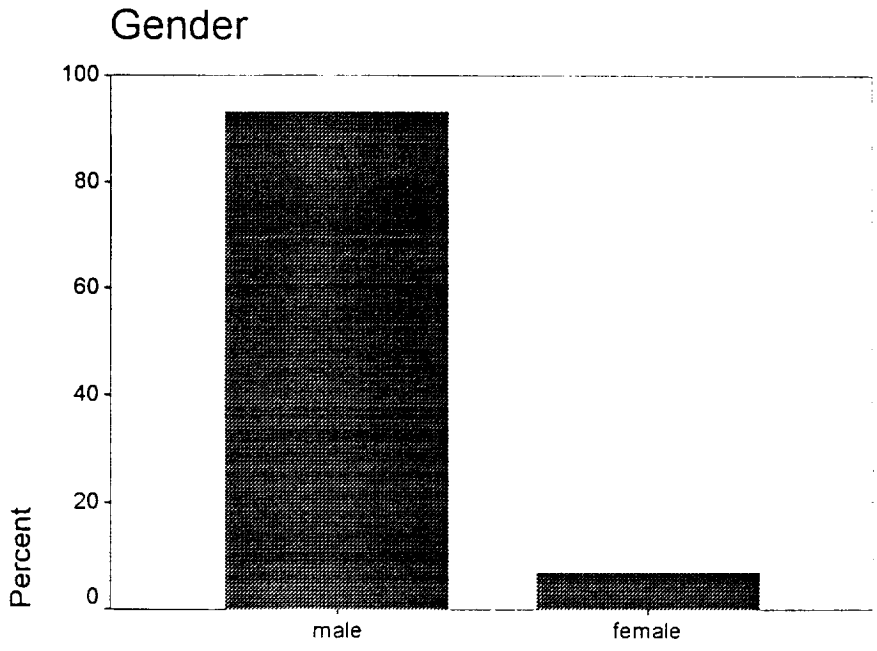
years in current position category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1	2103	23.8	25.2	25.2
	over 1, less than 2	774	8.8	9.3	34.5
	over 2, less than 5	736	8.3	8.8	43.3
	over 5, less than 10	2581	29.2	31.0	74.3
	over 10	2141	24.2	25.7	100.0
	Total	8335	94.3	100.0	
Missing	System	502	5.7		
Total		8837	100.0		

Shift

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Day shift	2604	29.5	39.1	39.1
	Afternoon/Swing shift	1954	22.1	29.4	68.5
	Night Shift	1585	17.9	23.8	92.3
	to be determined	261	3.0	3.9	96.2
	rotating/all shifts	176	2.0	2.6	98.8
	late days	77	.9	1.2	100.0
	Total	6657	75.3	100.0	
Missing	7	17	.2		
	8	144	1.6		
	9	523	5.9		
	System	1496	16.9		
	Total	2180	24.7		
Total		8837	100.0		

Bar Chart


Gender
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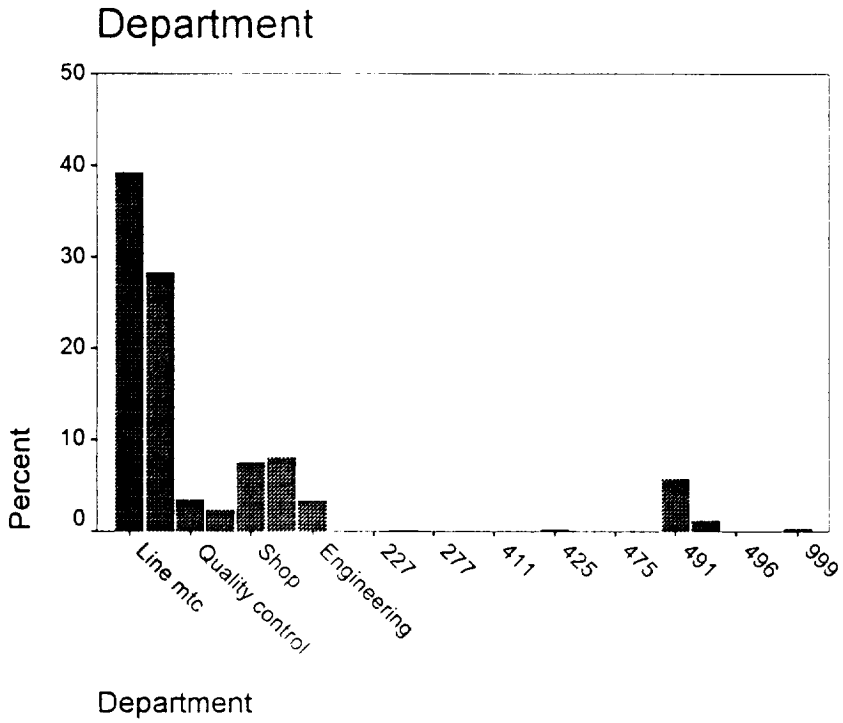
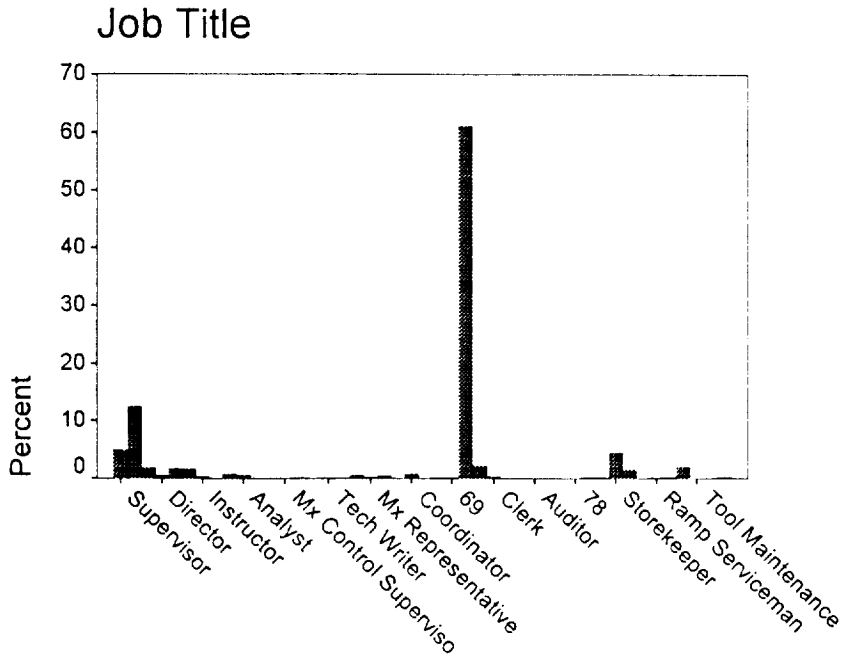
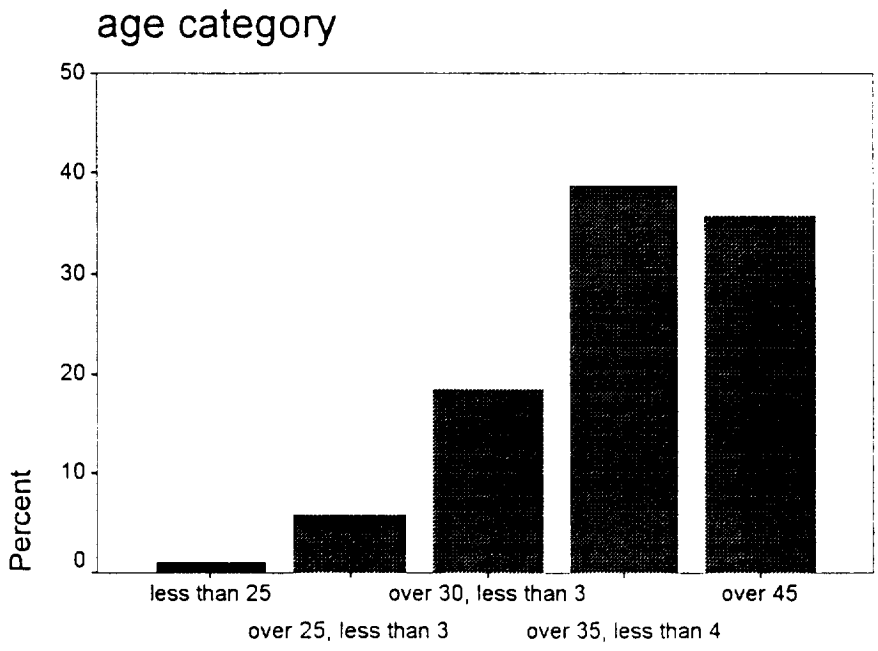
80
60
40
20
0
Percent
male
female
Gender

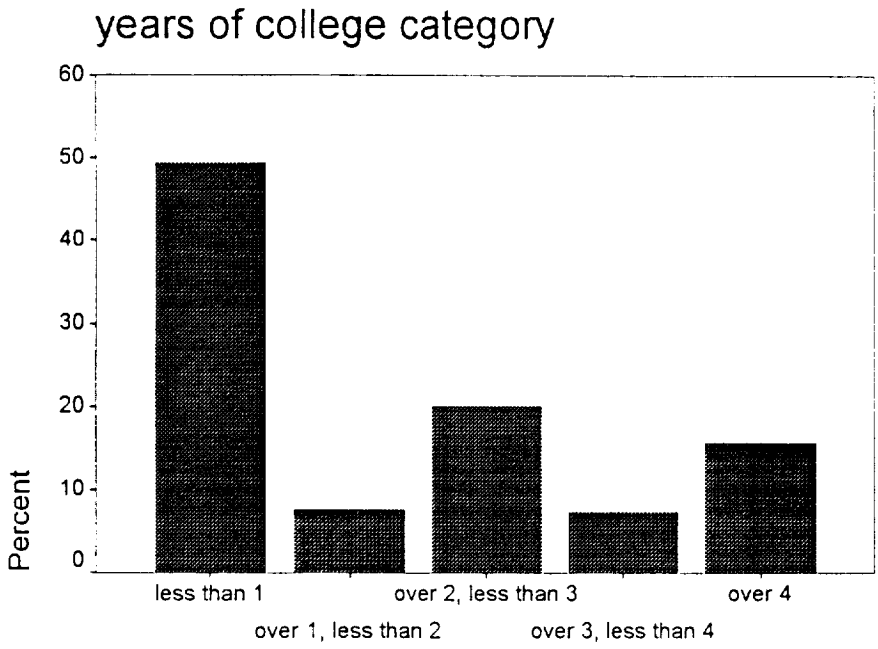

Department
50
40
30
20
10
0
Percent
Line mtc
Quality control
Shop
Engineering
227
277
411
425
475
491
496
999
Department



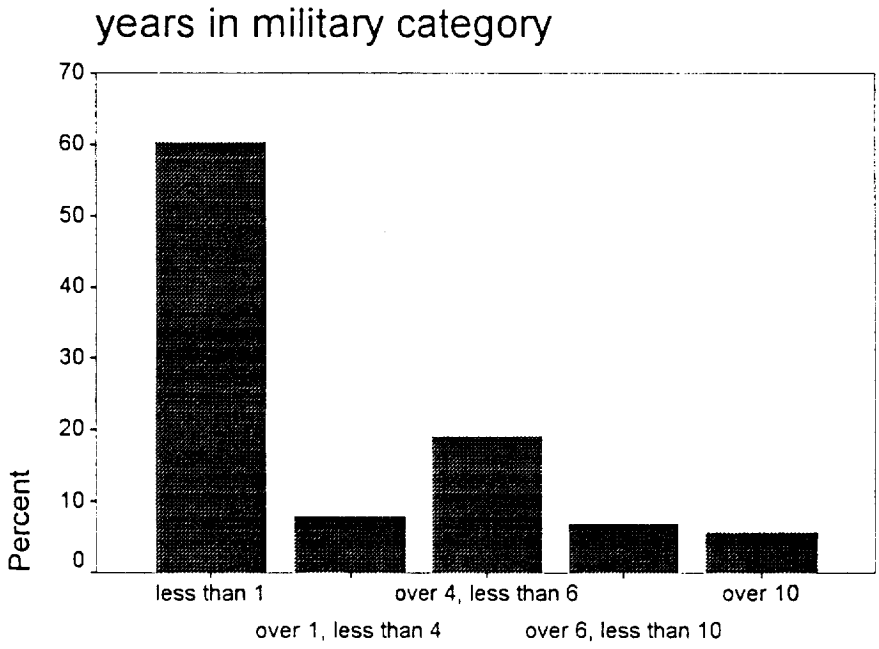
Job Title



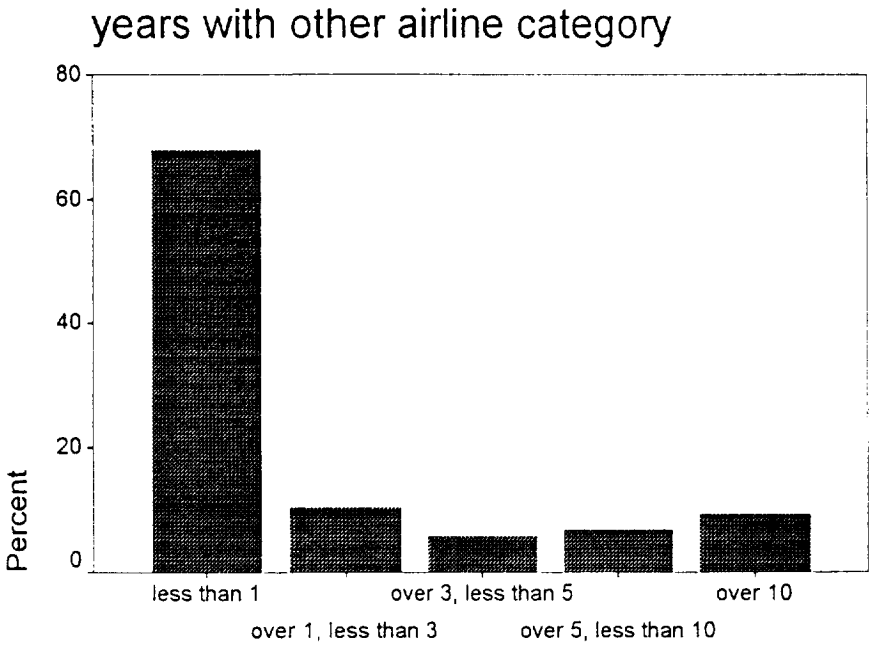
age category



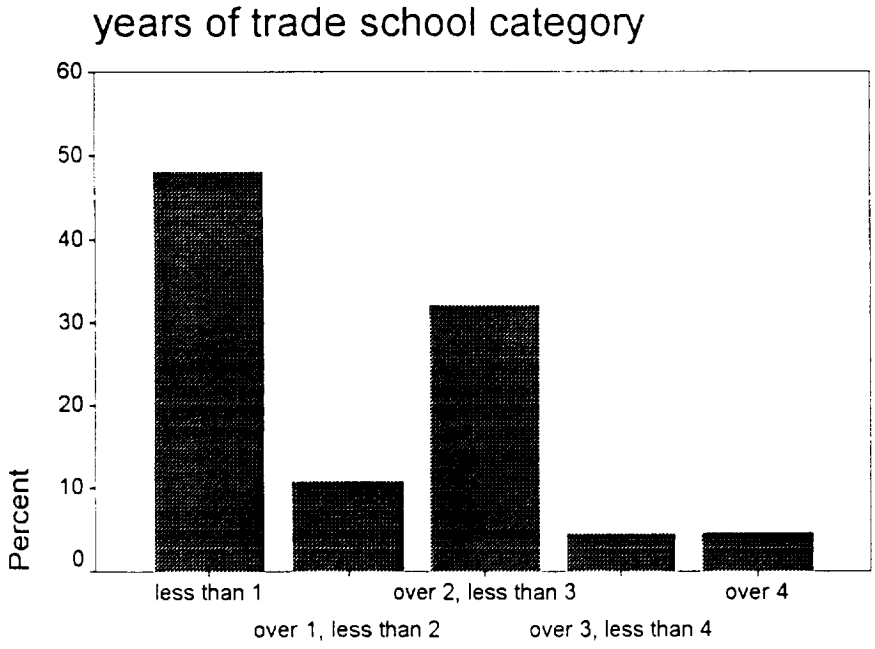
years of college category



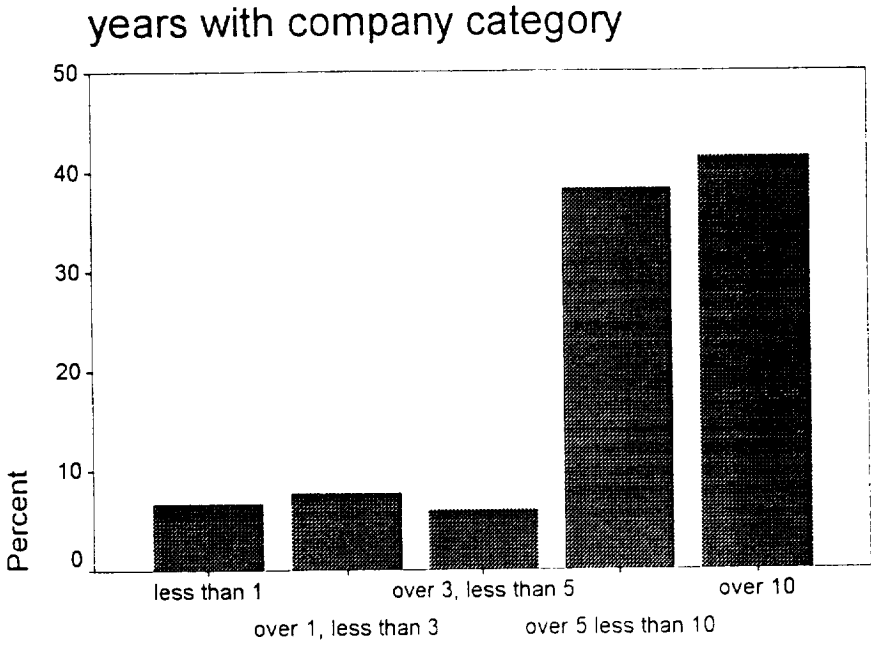
years in military category



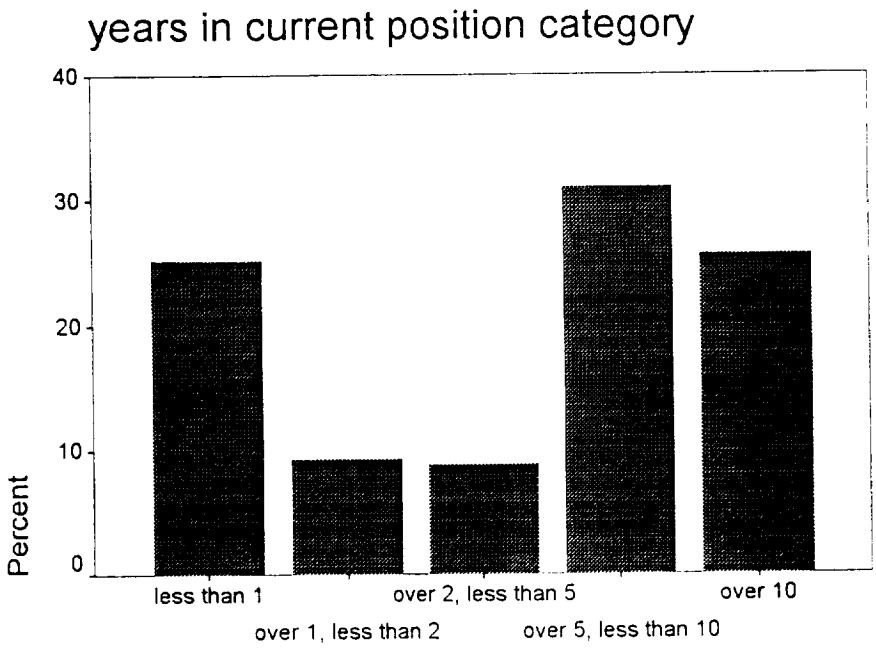
years with other airline category



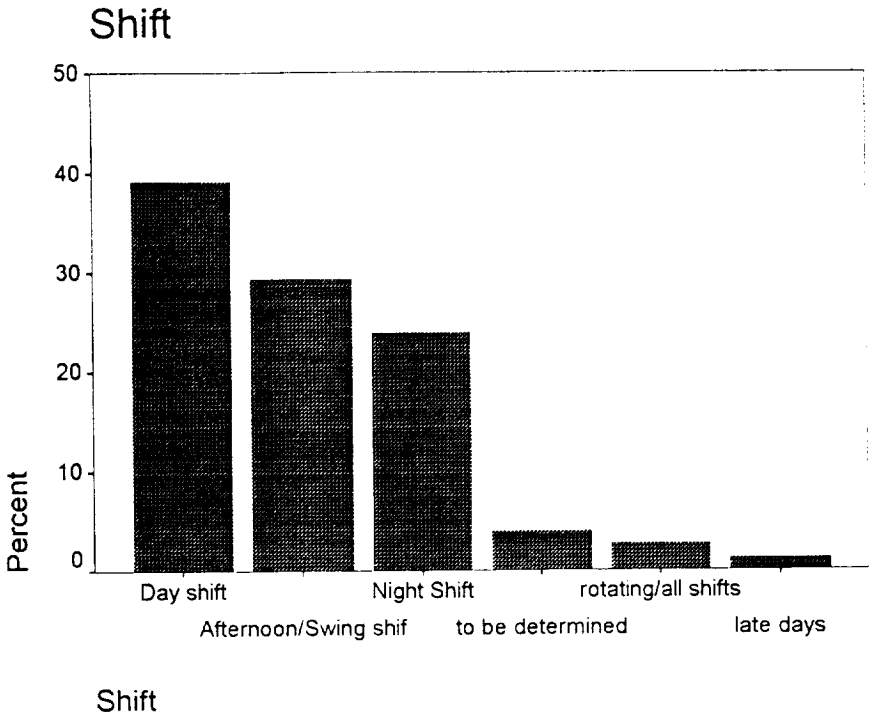
years of trade school category



years with company category



years in current position category


Shift
50
40
30
20
10
0
Percent
Day shift
Afternoon/Swing shif
Night Shift
to be determined
rotating/all shifts
late days
Shift

Frequencies

Statistics

		Communication & Coordination (pre)	Recognize Stress Effects (pre)	Assertiveness (pre)	Group Goal Attainment (pre)
N	Valid	8704	8727	8790	8506
	Missing	133	110	47	331
Mean		4.1725	2.6659	3.2096	3.0911
Median		4.2500	2.6667	3.0000	3.1667
Std. Deviation		.6673	.8831	1.1235	.8943
Skewness		-1.053	.245	-.163	-.184
Std. Error of Skewness		.026	.026	.026	.027
Kurtosis		1.570	-.347	-.827	-.401
Std. Error of Kurtosis		.052	.052	.052	.053
Percentiles	10	3.2500	1.6667	1.5000	1.8333
	20	3.7500	2.0000	2.0000	2.3333
	30	4.0000	2.3333	2.5000	2.6667
	40	4.0000	2.3333	3.0000	3.0000
	50	4.2500	2.6667	3.0000	3.1667
	60	4.5000	3.0000	3.5000	3.3333
	70	4.5000	3.0000	4.0000	3.6667
	80	4.7500	3.3333	4.5000	3.8333
	90	5.0000	4.0000	5.0000	4.1667

Statistics

		Safety Climate (pre)	Share Command Responsibility (pre)
N	Valid	6621	8695
	Missing	2216	142
Mean		3.6424	3.1655
Median		3.8000	3.2500
Std. Deviation		.8428	.8523
Skewness		-.479	-.015
Std. Error of Skewness		.030	.026
Kurtosis		-.196	-.418
Std. Error of Kurtosis		.060	.053
Percentiles	10	2.6000	2.0000
	20	3.0000	2.5000
	30	3.2000	2.7500
	40	3.4000	3.0000
	50	3.8000	3.2500
	60	4.0000	3.5000
	70	4.2000	3.7500
	80	4.4000	4.0000
	90	4.8000	4.2500

Frequency Table

Communication & Coordination (pre)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	17	.2	.2	.2
	1.25	6	.1	.1	.3
	1.50	16	.2	.2	.4
	1.75	11	.1	.1	.6
	2.00	43	.5	.5	1.1
	2.25	36	.4	.4	1.5
	2.50	108	1.2	1.2	2.7
	2.75	135	1.5	1.6	4.3
	3.00	293	3.3	3.4	7.6
	3.25	317	3.6	3.6	11.3
	3.50	620	7.0	7.1	18.4
	3.75	816	9.2	9.4	27.8
	4.00	1254	14.2	14.4	42.2
	4.25	1191	13.5	13.7	55.9
	4.50	1339	15.2	15.4	71.3
	4.75	1243	14.1	14.3	85.5
	5.00	1259	14.2	14.5	100.0
	Total	8704	98.5	100.0	
Missing	System	133	1.5		
Total		8837	100.0		

Recognize Stress Effects (pre)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	340	3.8	3.9	3.9
	1.33	1	.0	.0	3.9
	1.33	493	5.6	5.6	9.6
	1.67	771	8.7	8.8	18.4
	2.00	967	10.9	11.1	29.5
	2.33	1324	15.0	15.2	44.6
	2.67	1276	14.4	14.6	59.3
	3.00	1111	12.6	12.7	72.0
	3.17	1	.0	.0	72.0
	3.33	864	9.8	9.9	81.9
	3.67	700	7.9	8.0	89.9
	4.00	421	4.8	4.8	94.8
	4.33	250	2.8	2.9	97.6
	4.67	103	1.2	1.2	98.8
	5.00	105	1.2	1.2	100.0
	Total	8727	98.8	100.0	
Missing	System	110	1.2		
Total		8837	100.0		

Assertiveness (pre)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	472	5.3	5.4	5.4
	1.50	557	6.3	6.3	11.7
	2.00	878	9.9	10.0	21.7
	2.50	1011	11.4	11.5	33.2
	3.00	1680	19.0	19.1	52.3
	3.50	1059	12.0	12.0	64.4
	4.00	1357	15.4	15.4	79.8
	4.50	867	9.8	9.9	89.7
	5.00	909	10.3	10.3	100.0
	Total	8790	99.5	100.0	
Missing	System	47	.5		
Total		8837	100.0		

Group Goal Attainment (pre)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	162	1.8	1.9	1.9
	1.17	82	.9	1.0	2.9
	1.33	96	1.1	1.1	4.0
	1.50	157	1.8	1.8	5.8
	1.67	199	2.3	2.3	8.2
	1.83	204	2.3	2.4	10.6
	2.00	304	3.4	3.6	14.2
	2.17	340	3.8	4.0	18.2
	2.33	422	4.8	5.0	23.1
	2.50	412	4.7	4.8	28.0
	2.67	496	5.6	5.8	33.8
	2.83	512	5.8	6.0	39.8
	3.00	716	8.1	8.4	48.2
	3.17	579	6.6	6.8	55.0
	3.33	649	7.3	7.6	62.7
	3.50	578	6.5	6.8	69.5
	3.67	574	6.5	6.7	76.2
	3.83	450	5.1	5.3	81.5
	4.00	449	5.1	5.3	86.8
	4.17	291	3.3	3.4	90.2
	4.33	270	3.1	3.2	93.4
	4.50	187	2.1	2.2	95.6
	4.67	158	1.8	1.9	97.4
	4.83	98	1.1	1.2	98.6
	5.00	121	1.4	1.4	100.0
	Total	8506	96.3	100.0	
Missing	System	331	3.7		
Total		8837	100.0		

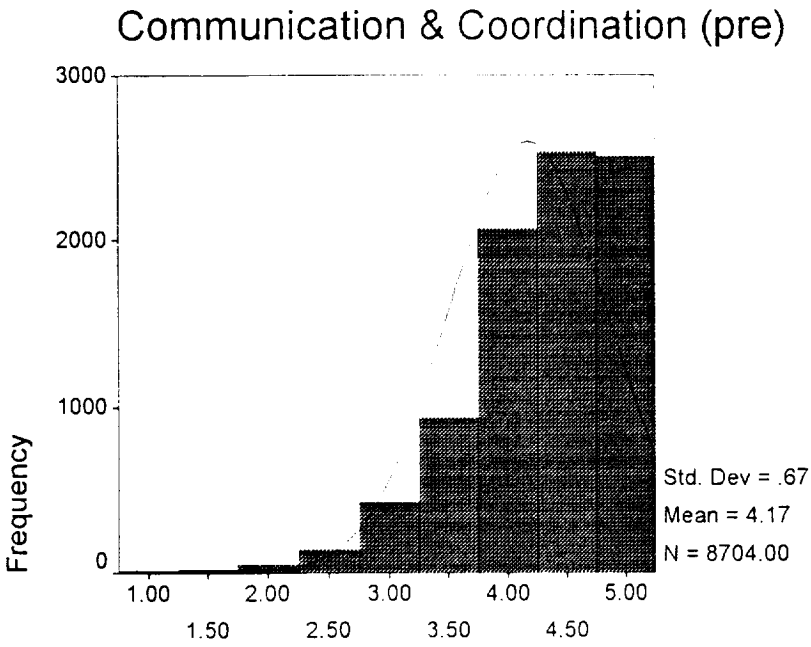
Safety Climate (pre)

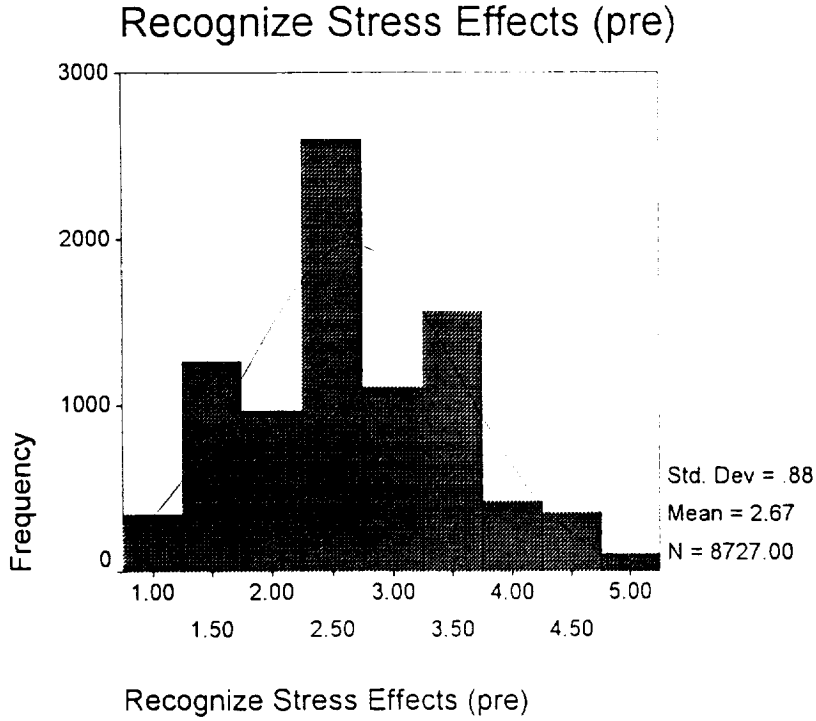
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	27	.3	.4	.4
	1.20	21	.2	.3	.7
	1.40	30	.3	.5	1.2
	1.60	48	.5	.7	1.9
	1.80	86	1.0	1.3	3.2
	2.00	96	1.1	1.4	4.7
	2.20	149	1.7	2.3	6.9
	2.40	172	1.9	2.6	9.5
	2.60	308	3.5	4.7	14.2
	2.80	318	3.6	4.8	19.0
	3.00	452	5.1	6.8	25.8
	3.20	472	5.3	7.1	32.9
	3.40	544	6.2	8.2	41.1
	3.60	555	6.3	8.4	49.5
	3.80	572	6.5	8.6	58.1
	4.00	564	6.4	8.5	66.7
	4.20	569	6.4	8.6	75.3
	4.40	501	5.7	7.6	82.8
	4.60	466	5.3	7.0	89.9
	4.80	349	3.9	5.3	95.1
	5.00	322	3.6	4.9	100.0
	Total	6621	74.9	100.0	
Missing	System	2216	25.1		
Total		8837	100.0		

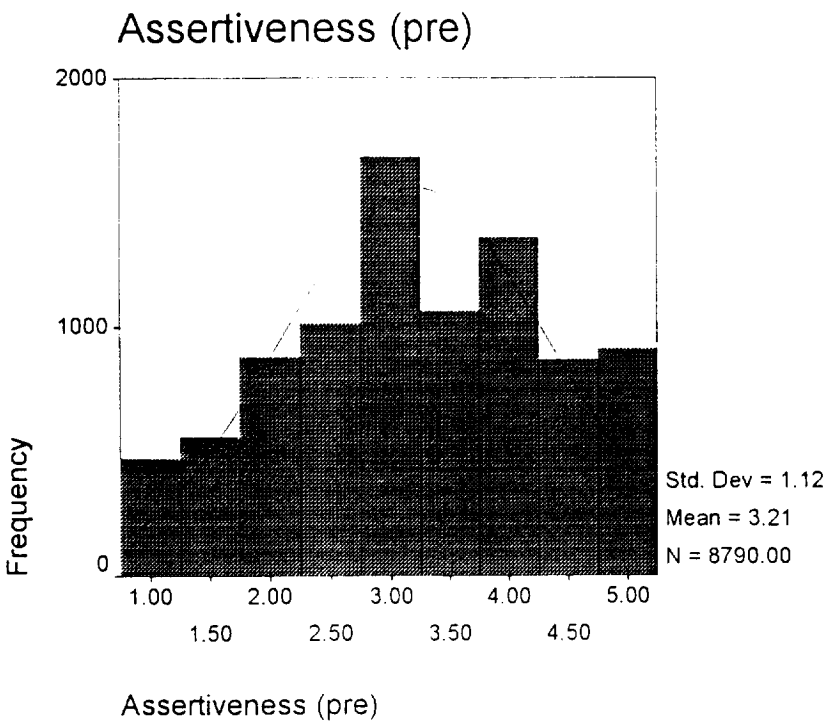
Share Command Responsibility (pre)

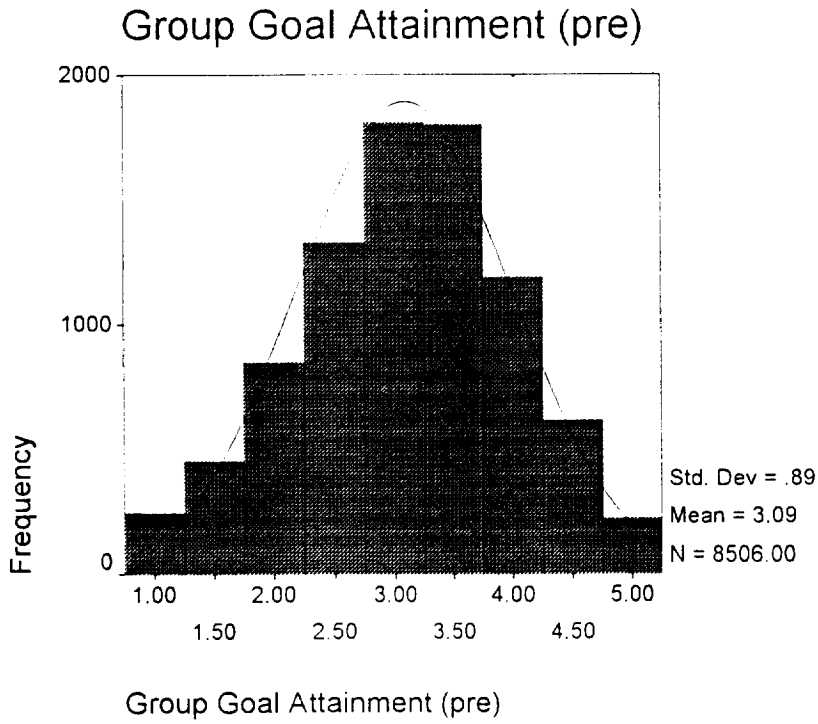
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	62	.7	.7	.7
	1.25	77	.9	.9	1.6
	1.50	164	1.9	1.9	3.5
	1.75	261	3.0	3.0	6.5
	2.00	444	5.0	5.1	11.6
	2.25	579	6.6	6.7	18.3
	2.50	751	8.5	8.6	26.9
	2.75	884	10.0	10.2	37.1
	3.00	1060	12.0	12.2	49.2
	3.25	914	10.3	10.5	59.8
	3.50	847	9.6	9.7	69.5
	3.75	748	8.5	8.6	78.1
	4.00	744	8.4	8.6	86.7
	4.25	448	5.1	5.2	91.8
	4.50	285	3.2	3.3	95.1
	4.75	216	2.4	2.5	97.6
	5.00	211	2.4	2.4	100.0
	Total	8695	98.4	100.0	
Missing	System	142	1.6		
Total		8837	100.0		

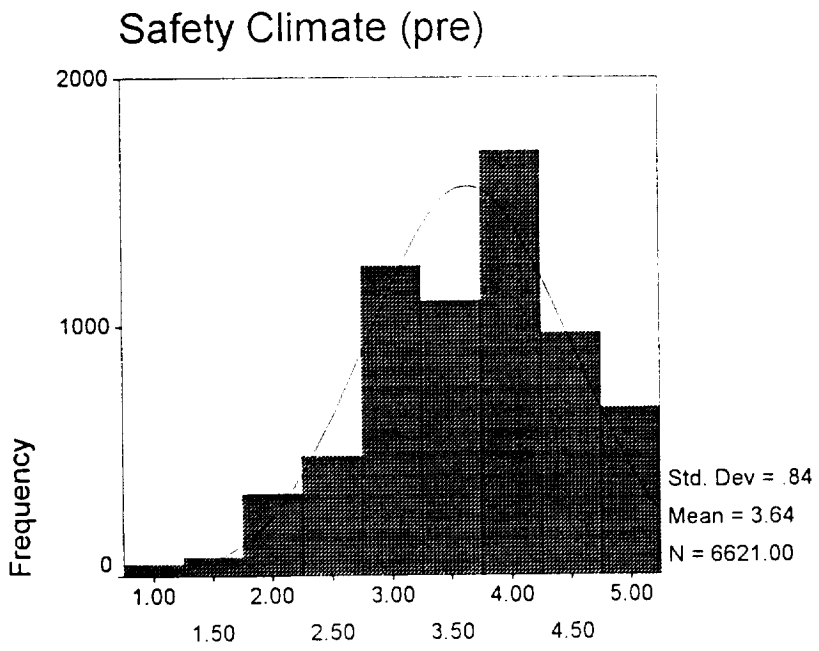
Histogram


Communication & Coordination (pre)
3000
2000
1000
0
Frequency
Std. Dev = .67
Mean = 4.17
N = 8704.00
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
Communication & Coordination (pre)

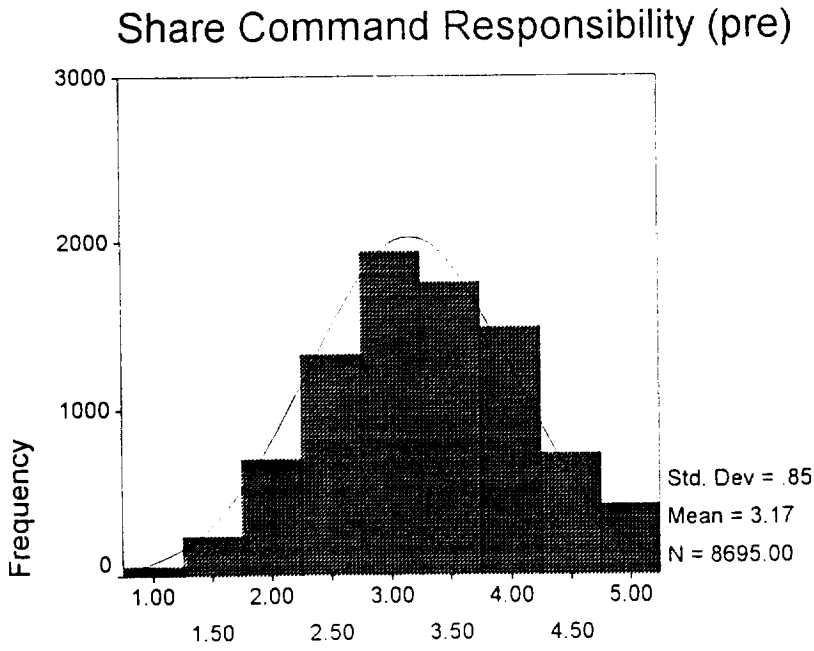

Recognize Stress Effects (pre)
3000
2000
1000
0
Frequency
Std. Dev = .88
Mean = 2.67
N = 8727.00
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
Recognize Stress Effects (pre)


Assertiveness (pre)
2000
1000
0
Frequency
Std. Dev = 1.12
Mean = 3.21
N = 8790.00
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
Assertiveness (pre)


Group Goal Attainment (pre)
2000
1000
0
Frequency
Std. Dev = .89
Mean = 3.09
N = 8506.00
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
Group Goal Attainment (pre)



Safety Climate (pre)



Share Command Responsibility (pre)

MRM Standard Profile
Post-training Survey
11/30/98

Frequencies

Statistics

		Share Command Responsibility (pre)	Communication & Coordination (post)	Recognize Stress Effects (post)	Assertiveness (post)	Group Goal Attainment (post)
N	Valid	8534	8545	8555	8651	8386
	Missing	176	165	155	59	324
Mean		3.3236	4.3114	2.9904	3.1266	3.1920
Median		3.2500	4.5000	3.0000	3.0000	3.1667
Std. Deviation		.8948	.6363	.9299	1.1698	.8792
Minimum		1.00	1.00	1.00	1.00	1.00
Maximum		5.00	5.00	5.00	5.00	5.00
Percentiles	25	2.7500	4.0000	2.3333	2.0000	2.6667
	50	3.2500	4.5000	3.0000	3.0000	3.1667
	75	4.0000	4.7500	3.6667	4.0000	3.8333

Statistics

		Safety Climate (post)	gender	Department	Job Title	age category	years of college category
N	Valid	6571	6428	5815	6506	5856	4936
	Missing	2139	2282	2895	2204	2854	3774
Mean		3.6893	1.06	53.08	63.68	3.88	2.19
Median		3.8000	1.00	2.00	70.00	4.00	1.00
Std. Deviation		.8493	.24	166.90	22.45	1.00	1.47
Minimum		1.00	1	1	1	1	1
Maximum		5.00	2	999	105	5	5
Percentiles	25	3.2000	1.00	1.00	70.00	3.00	1.00
	50	3.8000	1.00	2.00	70.00	4.00	1.00
	75	4.4000	1.00	5.00	70.00	5.00	3.00

Statistics

		years in military category	years with other airline category	years of trade school category	years with company category	years in current position category	Shift
N	Valid	5314	5190	4811	6062	6451	6277
	Missing	3396	3520	3899	2648	2259	2433
Mean		1.85	1.68	2.03	4.00	3.67	2.05
Median		1.00	1.00	1.00	4.00	4.00	2.00
Std. Deviation		1.26	1.27	1.17	1.25	1.32	1.06
Minimum		1	1	1	1	1	0
Maximum		5	5	5	5	5	6
Percentiles	25	1.00	1.00	1.00	4.00	3.00	1.00
	50	1.00	1.00	1.00	4.00	4.00	2.00
	75	3.00	2.00	3.00	5.00	5.00	3.00

Frequency Table

gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	6045	69.4	94.0	94.0
	female	383	4.4	6.0	100.0
	Total	6428	73.8	100.0	
Missing	8	11	.1		
	9	786	9.0		
	System	1485	17.0		
	Total	2282	26.2		
Total		8710	100.0		

Department

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Line mtc	2217	25.5	38.1	38.1
	Base mtc	1954	22.4	33.6	71.7
	Quality control	148	1.7	2.5	74.3
	Planning	16	.2	.3	74.5
	Shop	463	5.3	8.0	82.5
	Matl.Services	375	4.3	6.4	89.0
	Engineering	102	1.2	1.8	90.7
	227	2	.0	.0	90.7
	264	1	.0	.0	90.8
	265	3	.0	.1	90.8
	406	1	.0	.0	90.8
	422	1	.0	.0	90.9
	425	17	.2	.3	91.1
	431	1	.0	.0	91.2
	475	1	.0	.0	91.2
	491	365	4.2	6.3	97.5
	494	75	.9	1.3	98.7
	496	1	.0	.0	98.8
	497	1	.0	.0	98.8
	888	17	.2	.3	99.1
	999	54	.6	.9	100.0
	Total	5815	66.8	100.0	
Missing	other	202	2.3		
	missing	666	7.6		
	System	2027	23.3		
	Total	2895	33.2		
Total		8710	100.0		

Job Title

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Supervisor	17	.2	.3	.3
	Assistant Sup	575	6.6	8.8	9.1
	Manager	28	.3	.4	9.5
	Engineer	53	.6	.8	10.3
	Planner	15	.2	.2	10.6
	Instructor	21	.2	.3	10.9
	Analyst	17	.2	.3	11.2
	Controller	4	.0	.1	11.2
	Mx Control Supervisor	1	.0	.0	11.2
	Quality Auditor	12	.1	.2	11.4
	Specialist	23	.3	.4	11.8
	Mx Representative	23	.3	.4	12.1
	Scheduler	3	.0	.0	12.2
	Coordinator	29	.3	.4	12.6
	65	2	.0	.0	12.6
	Tech Asst	1	.0	.0	12.7
	69	3	.0	.0	12.7
	Mechanic	4786	54.9	73.6	86.3
	Inspector	129	1.5	2.0	88.3
	Clerk	27	.3	.4	88.7
	78	2	.0	.0	88.7
	79	21	.2	.3	89.0
	80	9	.1	.1	89.2
	Storekeeper	333	3.8	5.1	94.3
	Cleaner	116	1.3	1.8	96.1
	Station Mx Controller	6	.1	.1	96.2
	Ramp Serviceman	8	.1	.1	96.3
	Team Coordinator	19	.2	.3	96.6
	86	164	1.9	2.5	99.1
	Tool Maintenance	1	.0	.0	99.1
	88	1	.0	.0	99.1
	99	51	.6	.8	99.9
	101	1	.0	.0	99.9
	102	1	.0	.0	99.9
	103	1	.0	.0	100.0
	Janitor	3	.0	.0	100.0
	Total	6506	74.7	100.0	
Missing	888	92	1.1		
	999	627	7.2		
	System	1485	17.0		
	Total	2204	25.3		
Total		8710	100.0		

age category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 25	98	1.1	1.7	1.7
	over 25, less than 30	493	5.7	8.4	10.1
	over 30, less than 35	1266	14.5	21.6	31.7
	over 35, less than 45	2128	24.4	36.3	68.0
	over 45	1871	21.5	32.0	100.0
	Total	5856	67.2	100.0	
Missing	System	2854	32.8		
Total		8710	100.0		

years of college category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1	2653	30.5	53.7	53.7
	over 1, less than 2	347	4.0	7.0	60.8
	over 2, less than 3	952	10.9	19.3	80.1
	over 3, less than 4	309	3.5	6.3	86.3
	over 4	675	7.7	13.7	100.0
	Total	4936	56.7	100.0	
Missing	System	3774	43.3		
Total		8710	100.0		

years in military category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1	3347	38.4	63.0	63.0
	over 1, less than 4	387	4.4	7.3	70.3
	over 4, less than 6	919	10.6	17.3	87.6
	over 6, less than 10	344	3.9	6.5	94.0
	over 10	317	3.6	6.0	100.0
	Total	5314	61.0	100.0	
Missing	System	3396	39.0		
Total		8710	100.0		

years with other airline category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1	3755	43.1	72.4	72.4
	over 1, less than 3	477	5.5	9.2	81.5
	over 3, less than 5	232	2.7	4.5	86.0
	over 5, less than 10	324	3.7	6.2	92.3
	over 10	402	4.6	7.7	100.0
	Total	5190	59.6	100.0	
Missing	System	3520	40.4		
Total		8710	100.0		

years of trade school category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1	2423	27.8	50.4	50.4
	over 1, less than 2	453	5.2	9.4	59.8
	over 2, less than 3	1533	17.6	31.9	91.6
	over 3, less than 4	192	2.2	4.0	95.6
	over 4	210	2.4	4.4	100.0
	Total	4811	55.2	100.0	
Missing	System	3899	44.8		
Total		8710	100.0		

years with company category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1	496	5.7	8.2	8.2
	over 1, less than 3	507	5.8	8.4	16.5
	over 3, less than 5	190	2.2	3.1	19.7
	over 5 less than 10	2151	24.7	35.5	55.2
	over 10	2718	31.2	44.8	100.0
	Total	6062	69.6	100.0	
Missing	System	2648	30.4		
Total		8710	100.0		

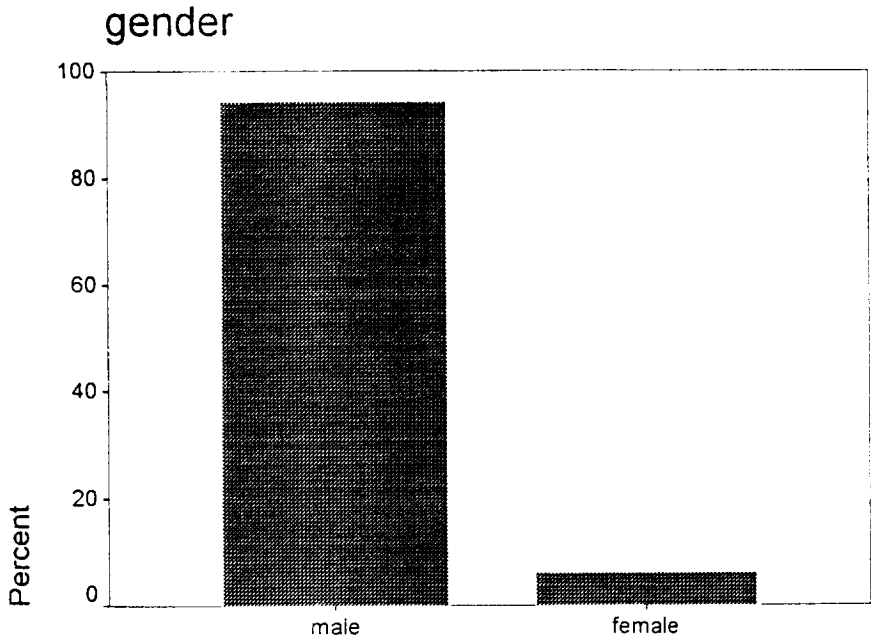
years in current position category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1	739	8.5	11.5	11.5
	over 1, less than 2	662	7.6	10.3	21.7
	over 2, less than 5	648	7.4	10.0	31.8
	over 5, less than 10	2366	27.2	36.7	68.4
	over 10	2036	23.4	31.6	100.0
	Total	6451	74.1	100.0	
Missing	System	2259	25.9		
Total		8710	100.0		

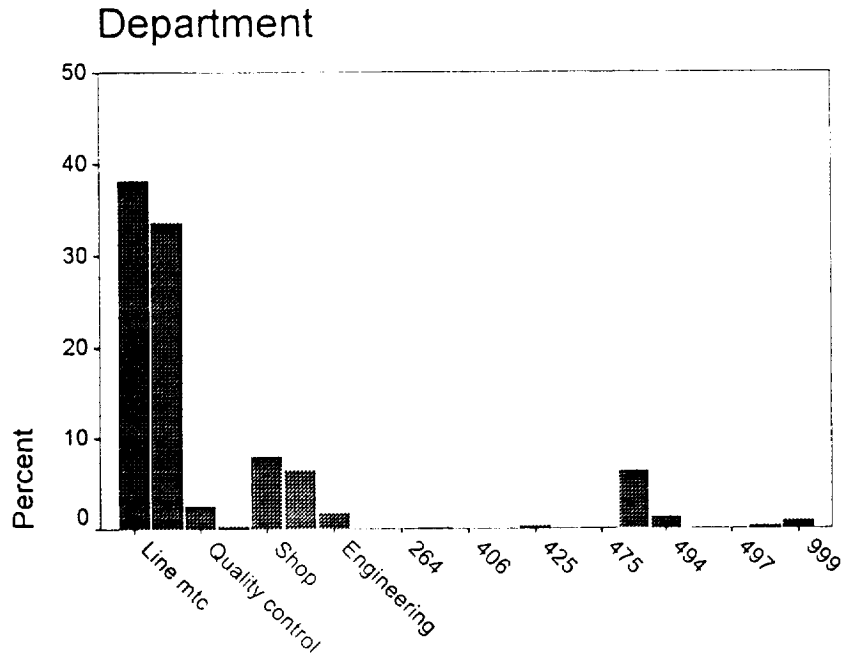
Shift

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	.0	.0	.0
	Day shift	2449	28.1	39.0	39.0
	Afternoon/Swing shift	1755	20.1	28.0	67.0
	Night Shift	1615	18.5	25.7	92.7
	to be determined	245	2.8	3.9	96.6
	rotating/all shifts	193	2.2	3.1	99.7
	late days	19	.2	.3	100.0
	Total	6277	72.1	100.0	
Missing	7	29	.3		
	8	70	.8		
	9	849	9.7		
	System	1485	17.0		
	Total	2433	27.9		
Total		8710	100.0		

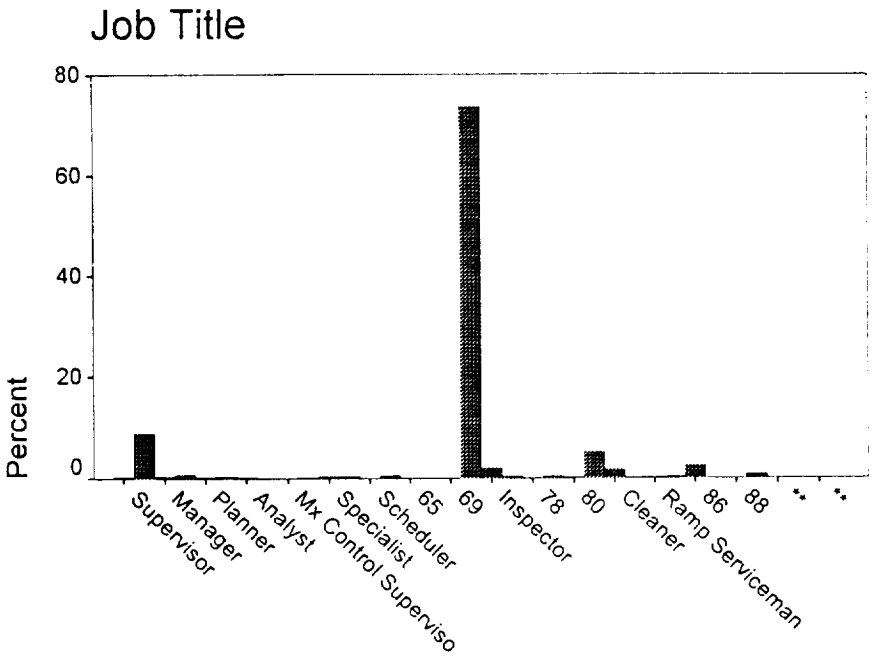
Bar Chart



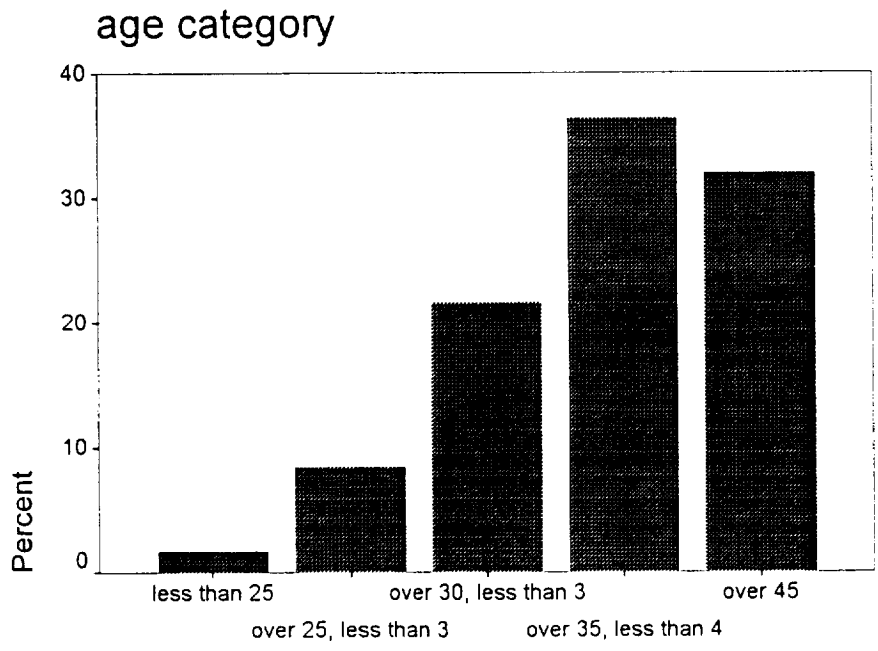
gender



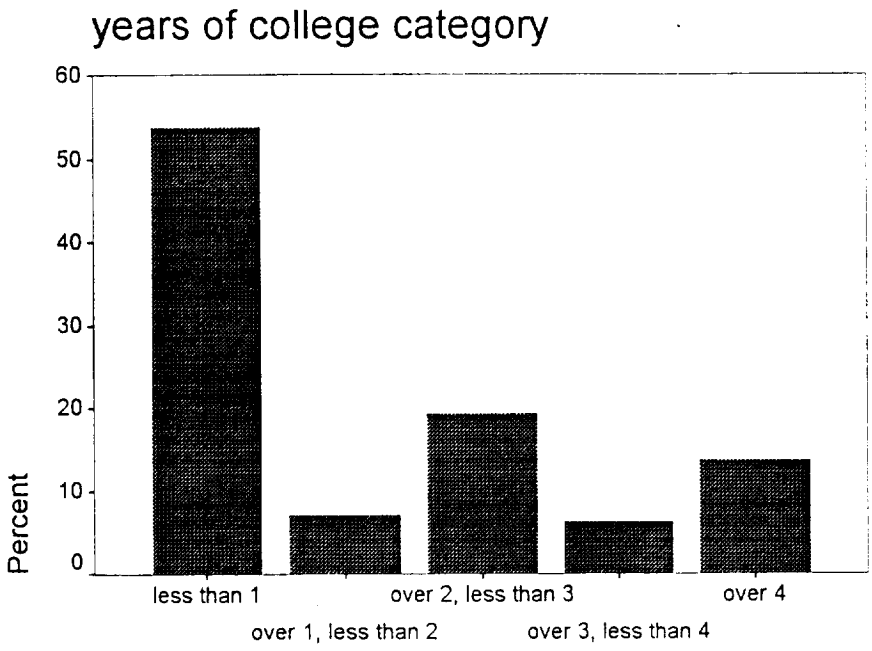
Department



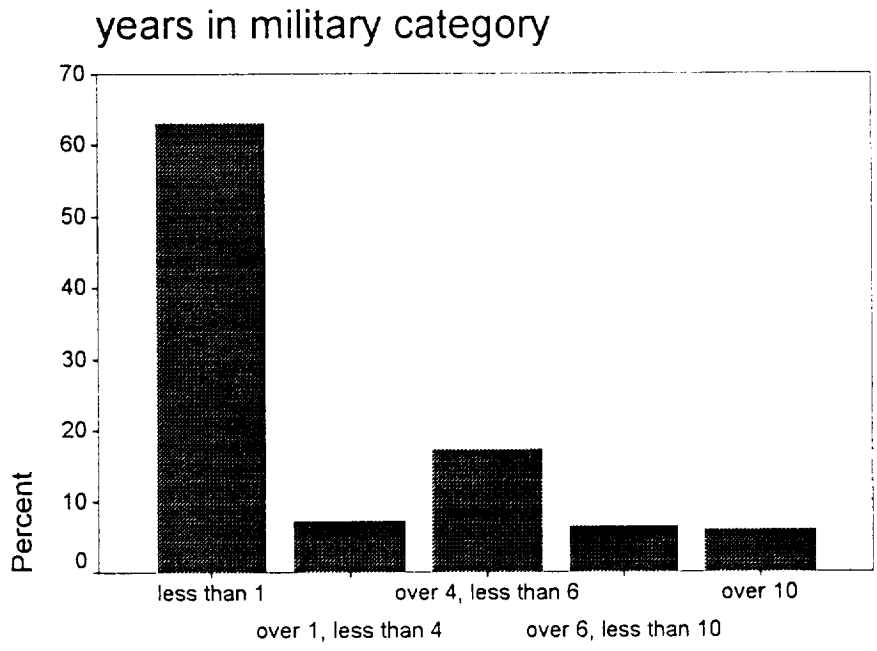
Job Title



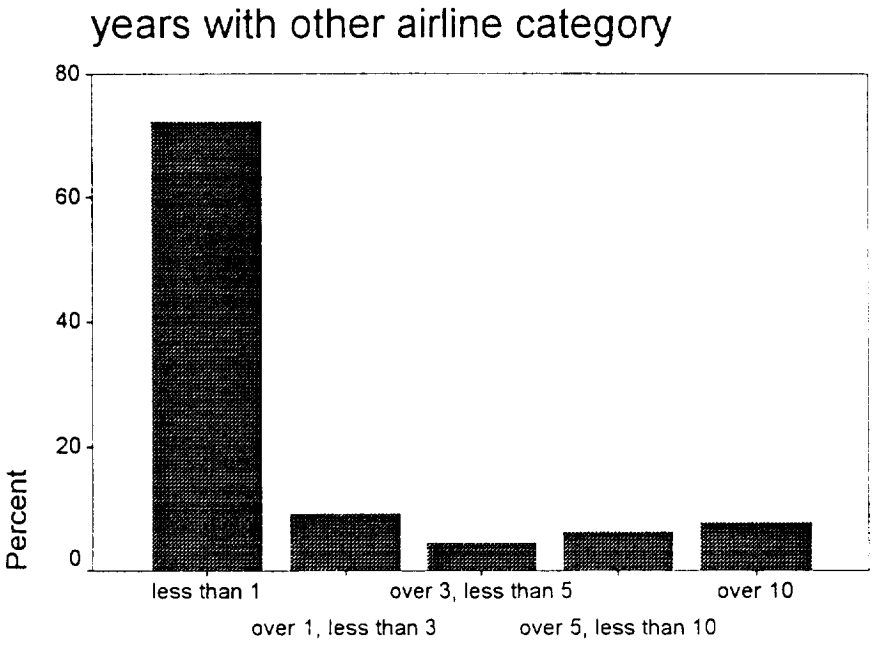
age category



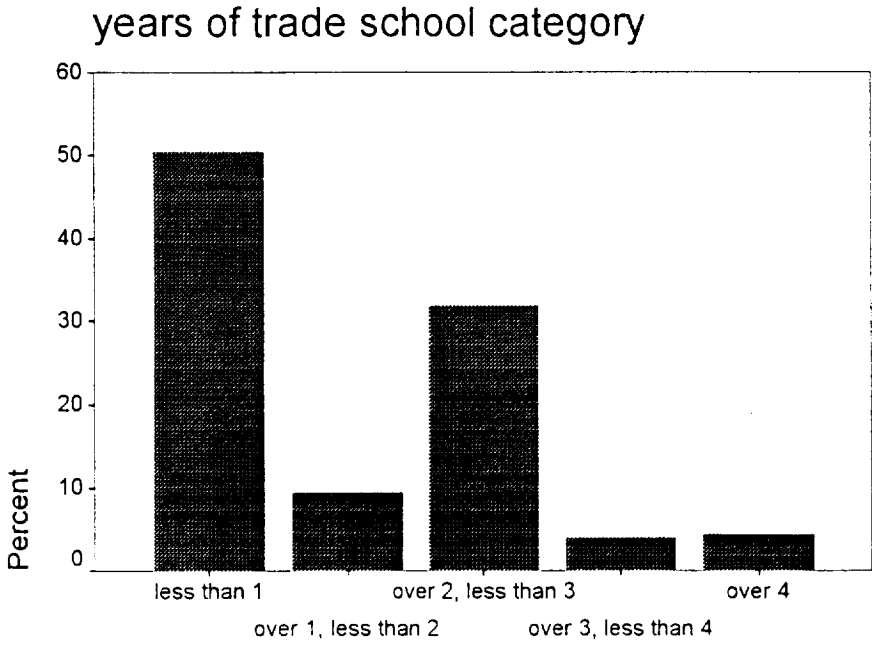
years of college category



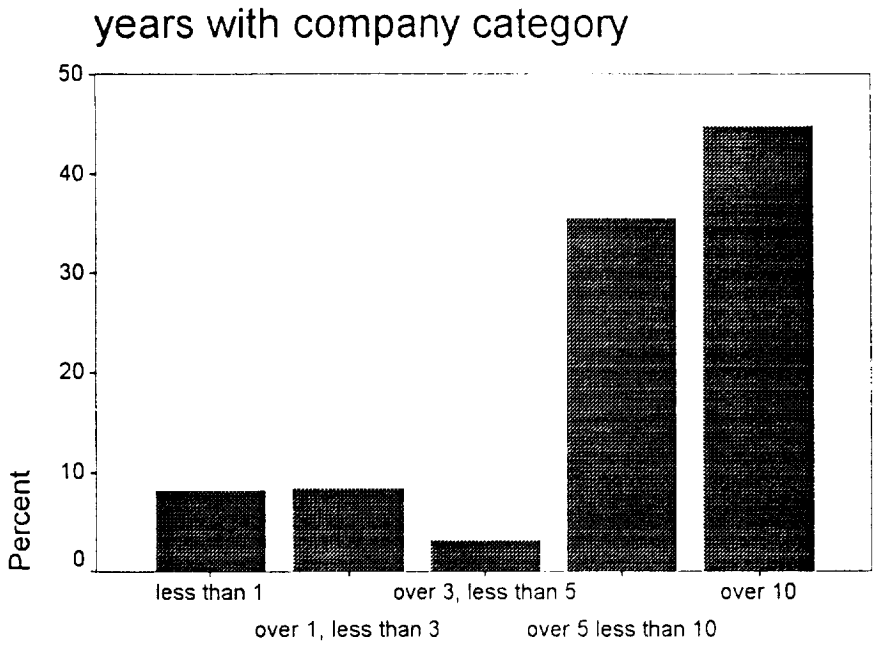
years in military category



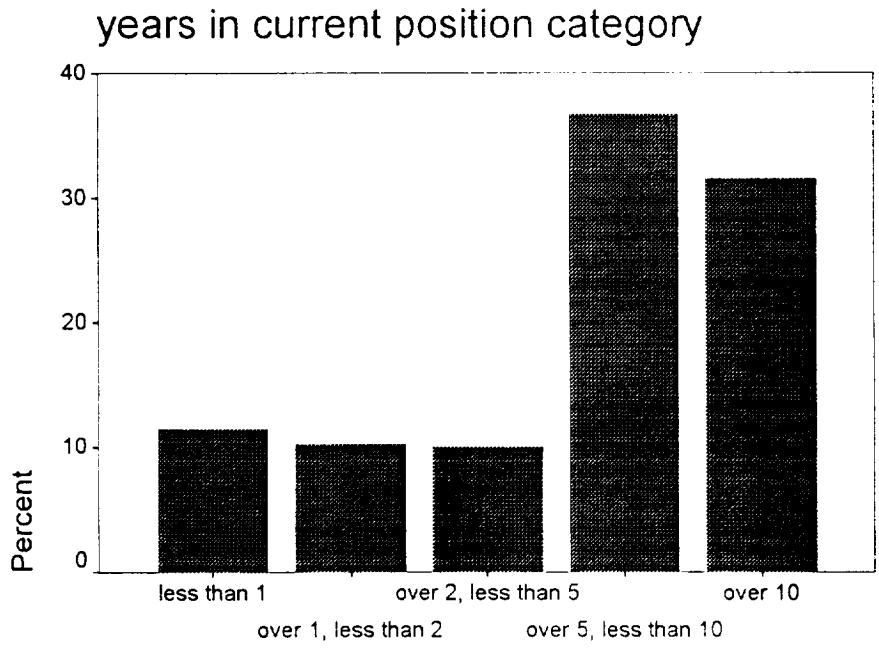
years with other airline category



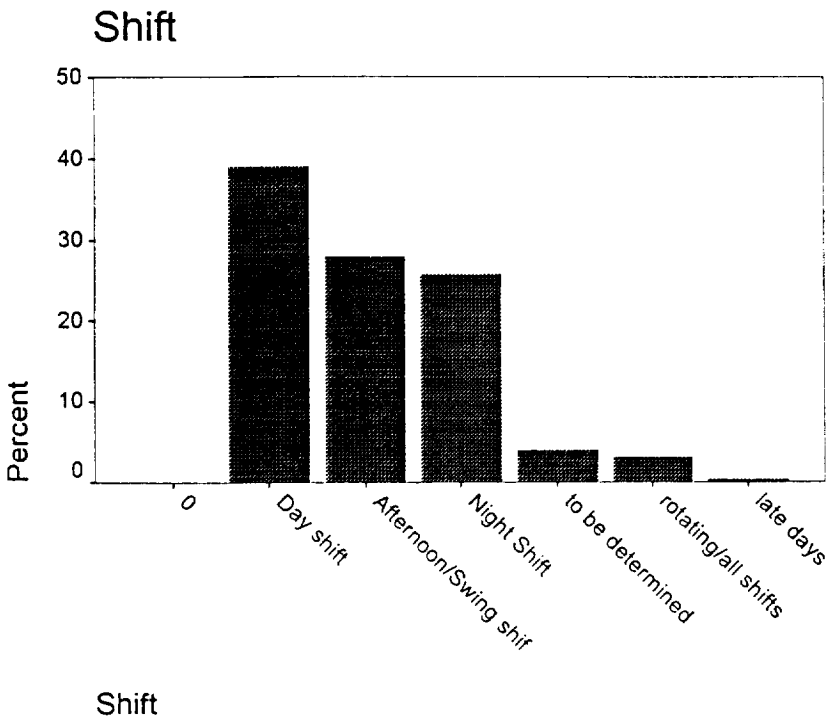
years of trade school category



years with company category



years in current position category


Shift
50
40
30
20
10
0
Percent
0
Day shift
Afternoon/Swing shif
Night Shift
to be determined
rotating/all shifts
late days
Shift

Frequencies

Statistics

		Communication & Coordination (post)	Recognize Stress Effects (post)	Assertiveness (post)	Group Goal Attainment (post)
N	Valid	8545	8555	8651	8386
	Missing	165	155	59	324
Mean		4.3114	2.9904	3.1266	3.1920
Median		4.5000	3.0000	3.0000	3.1667
Std. Deviation		.6363	.9299	1.1698	.8792
Skewness		-1.264	.074	-.116	-.230
Std. Error of Skewness		.026	.026	.026	.027
Kurtosis		2.451	-.484	-.926	-.255
Std. Error of Kurtosis		.053	.053	.053	.053
Percentiles	10	3.5000	1.6667	1.5000	2.0000
	20	3.7500	2.3333	2.0000	2.5000
	30	4.0000	2.3333	2.5000	2.8333
	40	4.2500	2.6667	3.0000	3.0000
	50	4.5000	3.0000	3.0000	3.1667
	60	4.5000	3.3333	3.5000	3.5000
	70	4.7500	3.3333	4.0000	3.6667
	80	5.0000	3.6667	4.0000	4.0000
	90	5.0000	4.3333	5.0000	4.3333

Statistics

		Safety Climate (post)	Share Command Responsibility (pre)
N	Valid	6571	8534
	Missing	2139	176
Mean		3.6893	3.3236
Median		3.8000	3.2500
Std. Deviation		.8493	.8948
Skewness		-.493	-.141
Std. Error of Skewness		.030	.027
Kurtosis		-.162	-.461
Std. Error of Kurtosis		.060	.053
Percentiles	10	2.6000	2.2500
	20	3.0000	2.5000
	30	3.2000	2.7500
	40	3.6000	3.0000
	50	3.8000	3.2500
	60	4.0000	3.5000
	70	4.2000	3.7500
	80	4.4000	4.0000
	90	4.8000	4.5000

Frequency Table

Communication & Coordination (post)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	19	.2	.2	.2
	1.25	7	.1	.1	.3
	1.50	11	.1	.1	.4
	1.75	6	.1	.1	.5
	2.00	20	.2	.2	.7
	2.25	32	.4	.4	1.1
	2.50	38	.4	.4	1.6
	2.75	79	.9	.9	2.5
	3.00	233	2.7	2.7	5.2
	3.25	265	3.0	3.1	8.3
	3.50	430	4.9	5.0	13.3
	3.75	668	7.7	7.8	21.2
	4.00	1059	12.2	12.4	33.6
	4.25	1130	13.0	13.2	46.8
	4.50	1234	14.2	14.4	61.2
	4.75	1478	17.0	17.3	78.5
	5.00	1836	21.1	21.5	100.0
	Total	8545	98.1	100.0	
Missing	System	165	1.9		
Total		8710	100.0		

Recognize Stress Effects (post)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	195	2.2	2.3	2.3
	1.33	274	3.1	3.2	5.5
	1.67	502	5.8	5.9	11.4
	2.00	639	7.3	7.5	18.8
	2.33	1028	11.8	12.0	30.8
	2.67	1207	13.9	14.1	44.9
	3.00	1144	13.1	13.4	58.3
	3.33	1017	11.7	11.9	70.2
	3.67	928	10.7	10.8	81.1
	4.00	661	7.6	7.7	88.8
	4.33	422	4.8	4.9	93.7
	4.67	290	3.3	3.4	97.1
	5.00	248	2.8	2.9	100.0
	Total	8555	98.2	100.0	
Missing	System	155	1.8		
Total		8710	100.0		

Assertiveness (post)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	615	7.1	7.1	7.1
	1.50	712	8.2	8.2	15.3
	2.00	847	9.7	9.8	25.1
	2.50	898	10.3	10.4	35.5
	3.00	1727	19.8	20.0	55.5
	3.50	918	10.5	10.6	66.1
	4.00	1221	14.0	14.1	80.2
	4.50	834	9.6	9.6	89.8
	5.00	879	10.1	10.2	100.0
	Total	8651	99.3	100.0	
Missing	System	59	.7		
Total		8710	100.0		

Group Goal Attainment (post)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	134	1.5	1.6	1.6
	1.17	63	.7	.8	2.3
	1.33	82	.9	1.0	3.3
	1.50	93	1.1	1.1	4.4
	1.67	165	1.9	2.0	6.4
	1.83	168	1.9	2.0	8.4
	2.00	256	2.9	3.1	11.5
	2.17	256	2.9	3.1	14.5
	2.33	358	4.1	4.3	18.8
	2.50	403	4.6	4.8	23.6
	2.67	476	5.5	5.7	29.3
	2.83	468	5.4	5.6	34.8
	3.00	742	8.5	8.8	43.7
	3.17	636	7.3	7.6	51.3
	3.33	648	7.4	7.7	59.0
	3.50	579	6.6	6.9	65.9
	3.67	614	7.0	7.3	73.2
	3.83	468	5.4	5.6	78.8
	4.00	480	5.5	5.7	84.5
	4.17	336	3.9	4.0	88.5
	4.33	279	3.2	3.3	91.9
	4.50	221	2.5	2.6	94.5
	4.67	170	2.0	2.0	96.5
	4.83	117	1.3	1.4	97.9
	5.00	174	2.0	2.1	100.0
	Total	8386	96.3	100.0	
Missing	System	324	3.7		
Total		8710	100.0		

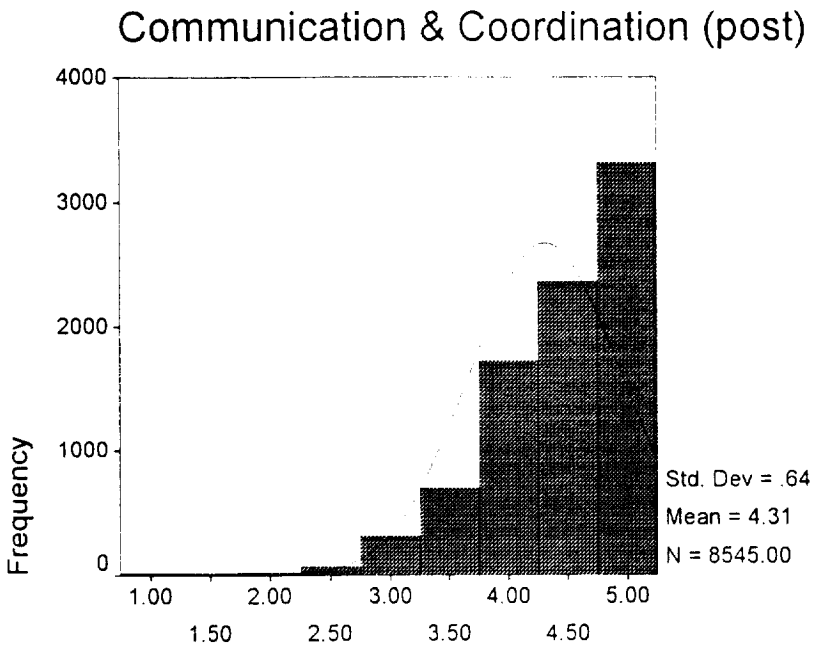
Safety Climate (post)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	25	.3	.4	.4
	1.20	20	.2	.3	.7
	1.40	36	.4	.5	1.2
	1.60	41	.5	.6	1.9
	1.80	85	1.0	1.3	3.2
	2.00	73	.8	1.1	4.3
	2.20	145	1.7	2.2	6.5
	2.40	161	1.8	2.5	8.9
	2.60	235	2.7	3.6	12.5
	2.80	327	3.8	5.0	17.5
	3.00	446	5.1	6.8	24.3
	3.20	483	5.5	7.4	31.6
	3.40	522	6.0	7.9	39.6
	3.60	534	6.1	8.1	47.7
	3.80	544	6.2	8.3	56.0
	4.00	568	6.5	8.6	64.6
	4.20	577	6.6	8.8	73.4
	4.40	469	5.4	7.1	80.5
	4.60	448	5.1	6.8	87.3
	4.80	408	4.7	6.2	93.5
	5.00	424	4.9	6.5	100.0
	Total	6571	75.4	100.0	
Missing	System	2139	24.6		
Total		8710	100.0		

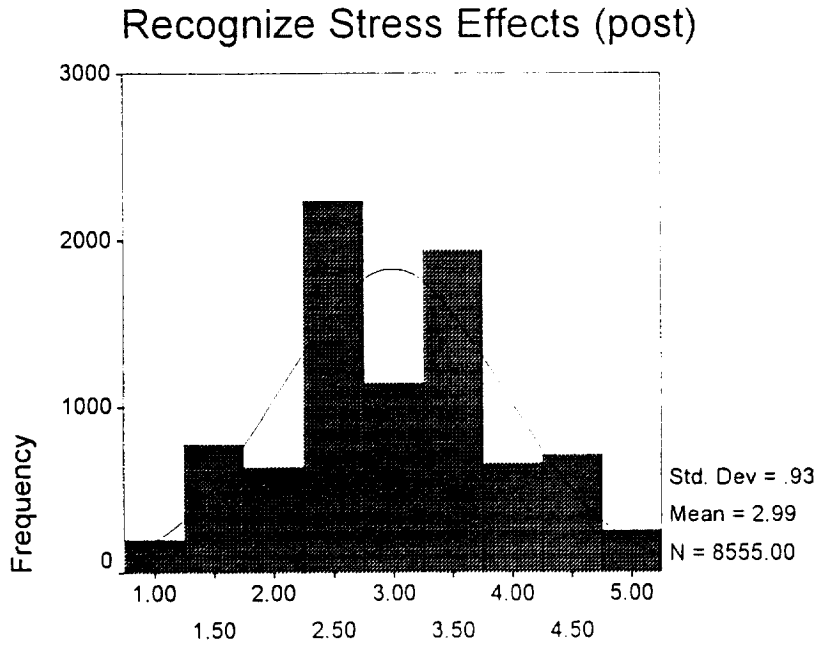
Share Command Responsibility (pre)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	67	.8	.8	.8
	1.25	81	.9	.9	1.7
	1.50	133	1.5	1.6	3.3
	1.75	194	2.2	2.3	5.6
	2.00	349	4.0	4.1	9.7
	2.25	472	5.4	5.5	15.2
	2.50	587	6.7	6.9	22.1
	2.75	687	7.9	8.1	30.1
	3.00	1050	12.1	12.3	42.4
	3.25	823	9.4	9.6	52.1
	3.50	851	9.8	10.0	62.0
	3.75	760	8.7	8.9	70.9
	4.00	817	9.4	9.6	80.5
	4.25	541	6.2	6.3	86.9
	4.50	413	4.7	4.8	91.7
	4.75	337	3.9	3.9	95.6
	5.00	372	4.3	4.4	100.0
	Total	8534	98.0	100.0	
Missing	System	176	2.0		
Total		8710	100.0		

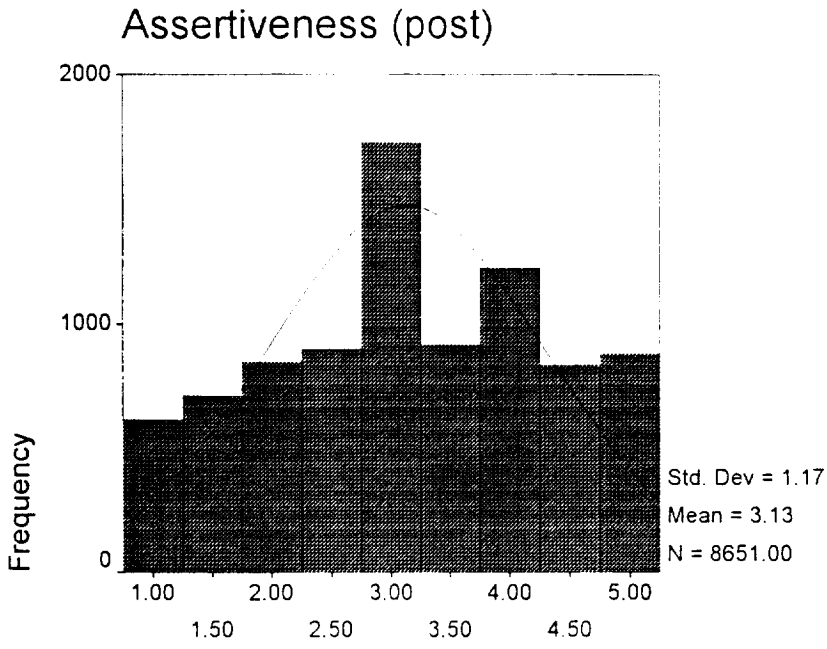
Histogram

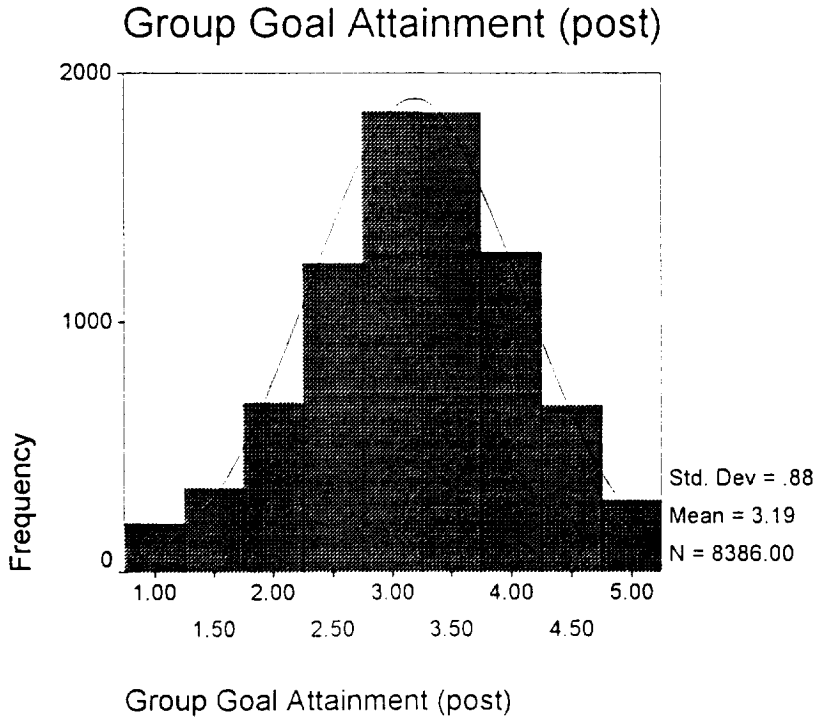


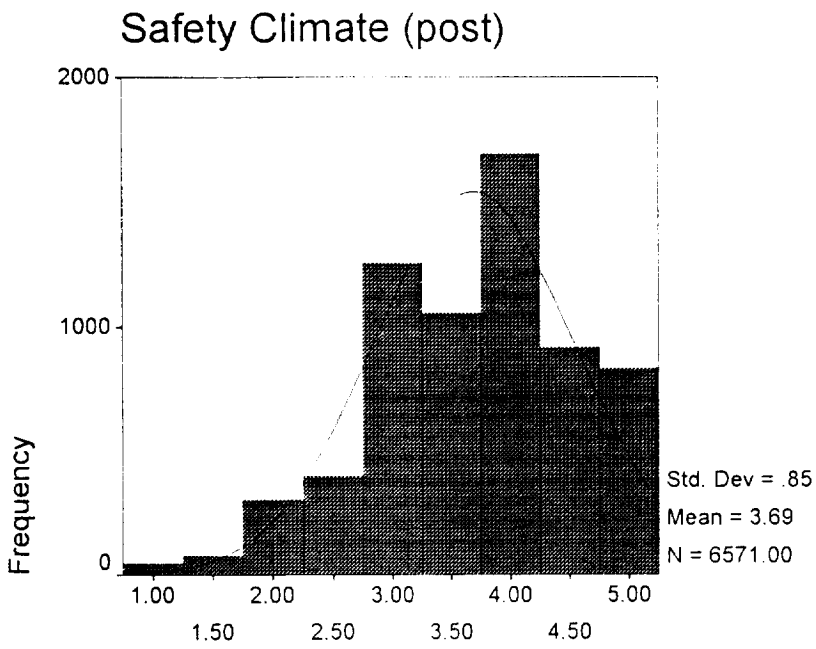
Communication & Coordination (post)

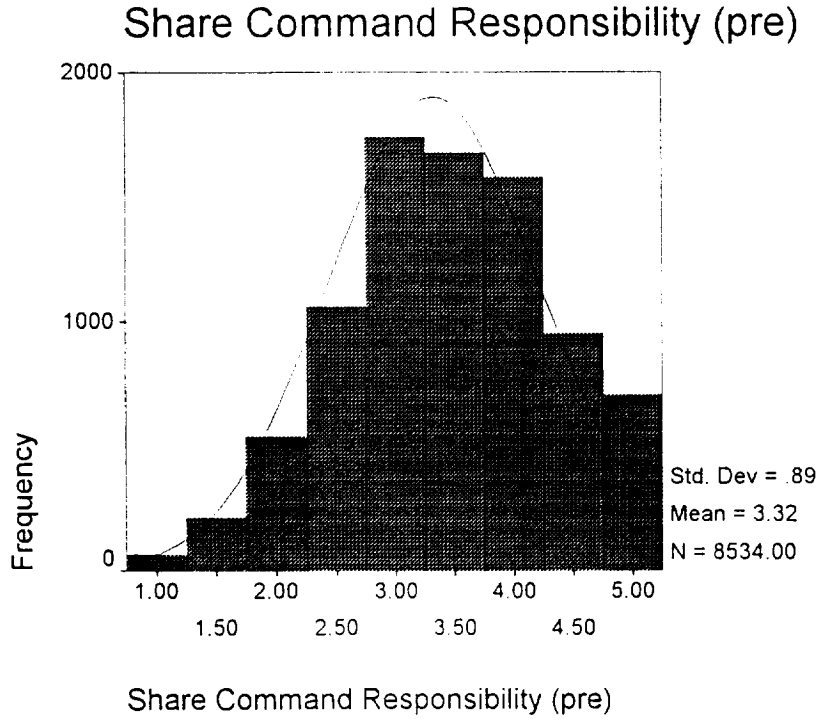


Recognize Stress Effects (post)


Assertiveness (post)
2000
1000
0
Frequency
Std. Dev = 1.17
Mean = 3.13
N = 8651.00
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
Assertiveness (post)


Group Goal Attainment (post)
2000
1000
0
Frequency
Std. Dev = .88
Mean = 3.19
N = 8386.00
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
Group Goal Attainment (post)


Safety Climate (post)
2000
1000
0
Frequency
Std. Dev = .85
Mean = 3.69
N = 6571.00
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
Safety Climate (post)


Share Command Responsibility (pre)
2000
1000
0
Frequency
Std. Dev = .89
Mean = 3.32
N = 8534.00
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
Share Command Responsibility (pre)

MRM Standard Profile
2-Month Follow-up Survey
11/30/98

Frequencies

Statistics

		Share Command Responsibility (2mo	Communication & Coordination (2mo)	Recognize Stress Effects (2mo)	Assertiveness (2mo)	Group Goal Attainment (2mo)
N	Valid	2292	2298	2294	2305	2183
	Missing	22	16	20	9	131
Mean		3.2699	4.3429	2.8412	3.1662	3.2123
Median		3.2500	4.5000	2.6667	3.0000	3.3333
Std. Deviation		.8983	.6070	.9295	1.1300	.8905
Minimum		1.00	1.00	1.00	1.00	.33
Maximum		5.00	5.00	5.00	5.00	5.00
Percentiles	25	2.7500	4.0000	2.3333	2.5000	2.5000
	50	3.2500	4.5000	2.6667	3.0000	3.3333
	75	4.0000	4.7500	3.6667	4.0000	3.8333

Statistics

		Safety Climate (2mo)	Gender	Department	Job Title	age category	years of college category
N	Valid	1412	2200	1911	2193	1846	1990
	Missing	902	114	403	121	468	324
Mean		3.7273	1.08	2.83	45.67	3.13	2.04
Median		3.8000	1.00	2.00	70.00	3.00	1.00
Std. Deviation		.8543	.27	1.88	32.51	1.42	1.34
Minimum		1.00	1	1	1	1	1
Maximum		5.00	2	7	104	5	5
Percentiles	25	3.2000	1.00	1.00	3.00	2.00	1.00
	50	3.8000	1.00	2.00	70.00	3.00	1.00
	75	4.4000	1.00	5.00	70.00	4.00	3.00

Statistics

		years in military category	years with other airline category	years of trade school category	years with company category	years in current position category	Shift
N	Valid	2098	2048	1978	1880	2185	1344
	Missing	216	266	336	434	129	970
Mean		1.62	1.61	2.02	3.00	2.76	1.84
Median		1.00	1.00	1.00	4.00	3.00	2.00
Std. Deviation		1.12	1.21	1.18	1.68	1.66	.94
Minimum		1	1	1	1	1	1
Maximum		5	5	5	5	5	6
Percentiles	25	1.00	1.00	1.00	1.00	1.00	1.00
	50	1.00	1.00	1.00	4.00	3.00	2.00
	75	2.00	2.00	3.00	5.00	4.00	3.00

Frequency Table

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	2031	87.8	92.3	92.3
	female	169	7.3	7.7	100.0
	Total	2200	95.1	100.0	
Missing	8	4	.2		
	9	109	4.7		
	System	1	.0		
	Total	114	4.9		
Total		2314	100.0		

Department

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Line mtc	613	26.5	32.1	32.1
	Base mtc	572	24.7	29.9	62.0
	Quality control	78	3.4	4.1	66.1
	Planning	96	4.1	5.0	71.1
	Shop	338	14.6	17.7	88.8
	Matl.Services	155	6.7	8.1	96.9
	Engineering	59	2.5	3.1	100.0
	Total	1911	82.6	100.0	
Missing	other	290	12.5		
	missing	97	4.2		
	System	16	.7		
	Total	403	17.4		
Total		2314	100.0		

Job Title

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Supervisor	174	7.5	7.9	7.9
	Assistant Sup	310	13.4	14.1	22.1
	Manager	79	3.4	3.6	25.7
	Director	21	.9	1.0	26.6
	Engineer	54	2.3	2.5	29.1
	Planner	76	3.3	3.5	32.6
	Instructor	14	.6	.6	33.2
	Matl Coordinator	16	.7	.7	33.9
	Analyst	22	1.0	1.0	34.9
	Controller	3	.1	.1	35.1
	Mx Control Supervisor	6	.3	.3	35.3

Job Title

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Quality Auditor	15	.6	.7	36.0
	25	7	.3	.3	36.3
	Tech Writer	7	.3	.3	36.7
	30	6	.3	.3	36.9
	31	3	.1	.1	37.1
	Exec.Scy	4	.2	.2	37.3
	Specialist	12	.5	.5	37.8
	40	1	.0	.0	37.8
	43	1	.0	.0	37.9
	45	1	.0	.0	37.9
	Mx Representative	14	.6	.6	38.6
	Scheduler	26	1.1	1.2	39.8
	51	1	.0	.0	39.8
	52	1	.0	.0	39.9
	57	1	.0	.0	39.9
	Coordinator	16	.7	.7	40.6
	Quality Assurance	1	.0	.0	40.7
	64	1	.0	.0	40.7
	66	3	.1	.1	40.9
	Tech Asst.	3	.1	.1	41.0
	69	1	.0	.0	41.0
	Mechanic	1103	47.7	50.3	91.3
	Inspector	55	2.4	2.5	93.8
	Clerk	18	.8	.8	94.7
	Warranty	1	.0	.0	94.7
	Purchasing	1	.0	.0	94.8
	Auditor	1	.0	.0	94.8
	76	3	.1	.1	94.9
	80	3	.1	.1	95.1
	Storekeeper	55	2.4	2.5	97.6
	Cleaner	19	.8	.9	98.4
	Station Mx Controller	1	.0	.0	98.5
	Ramp Serviceman	2	.1	.1	98.6
	Team Coordinator	6	.3	.3	98.9
	86	1	.0	.0	98.9
	Tool Maintenance	2	.1	.1	99.0
	89	1	.0	.0	99.0
	90	2	.1	.1	99.1
	101	6	.3	.3	99.4
	102	7	.3	.3	99.7
	103	4	.2	.2	99.9
	104	2	.1	.1	100.0
	Total	2193	94.8	100.0	

Job Title

		Frequency	Percent	Valid Percent	Cumulative Percent
Missing	888	17	.7		
	999	103	4.5		
	System	1	.0		
	Total	121	5.2		
Total		2314	100.0		

age category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 25	378	16.3	20.5	20.5
	over 25, less than 30	246	10.6	13.3	33.8
	over 30, less than 35	366	15.8	19.8	53.6
	over 35, less than 45	468	20.2	25.4	79.0
	over 45	388	16.8	21.0	100.0
	Total	1846	79.8	100.0	
Missing	System	468	20.2		
Total		2314	100.0		

years of college category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1	1066	46.1	53.6	53.6
	over 1, less than 2	268	11.6	13.5	67.0
	over 2, less than 3	352	15.2	17.7	84.7
	over 3, less than 4	117	5.1	5.9	90.6
	over 4	187	8.1	9.4	100.0
	Total	1990	86.0	100.0	
Missing	System	324	14.0		
Total		2314	100.0		

years in military category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1	1507	65.1	71.8	71.8
	over 1, less than 4	154	6.7	7.3	79.2
	over 4, less than 6	255	11.0	12.2	91.3
	over 6, less than 10	92	4.0	4.4	95.7
	over 10	90	3.9	4.3	100.0
	Total	2098	90.7	100.0	
Missing	System	216	9.3		
Total		2314	100.0		

years with other airline category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1	1524	65.9	74.4	74.4
	over 1, less than 3	175	7.6	8.5	83.0
	over 3, less than 5	98	4.2	4.8	87.7
	over 5, less than 10	117	5.1	5.7	93.5
	over 10	134	5.8	6.5	100.0
	Total	2048	88.5	100.0	
Missing	System	266	11.5		
Total		2314	100.0		

years of trade school category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1	1000	43.2	50.6	50.6
	over 1, less than 2	207	8.9	10.5	61.0
	over 2, less than 3	596	25.8	30.1	91.2
	over 3, less than 4	81	3.5	4.1	95.2
	over 4	94	4.1	4.8	100.0
	Total	1978	85.5	100.0	
Missing	System	336	14.5		
Total		2314	100.0		

years with company category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1	661	28.6	35.2	35.2
	over 1, less than 3	160	6.9	8.5	43.7
	over 3, less than 5	95	4.1	5.1	48.7
	over 5 less than 10	453	19.6	24.1	72.8
	over 10	511	22.1	27.2	100.0
	Total	1880	81.2	100.0	
Missing	System	434	18.8		
Total		2314	100.0		

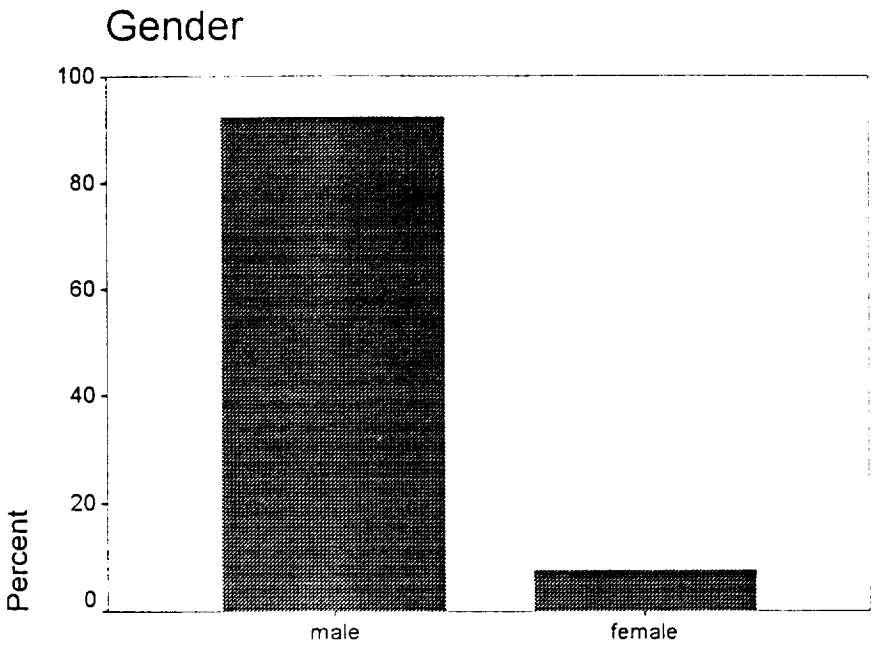
years in current position category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1	883	38.2	40.4	40.4
	over 1, less than 2	208	9.0	9.5	49.9
	over 2, less than 5	140	6.1	6.4	56.3
	over 5, less than 10	468	20.2	21.4	77.8
	over 10	486	21.0	22.2	100.0
	Total	2185	94.4	100.0	
Missing	System	129	5.6		
Total		2314	100.0		

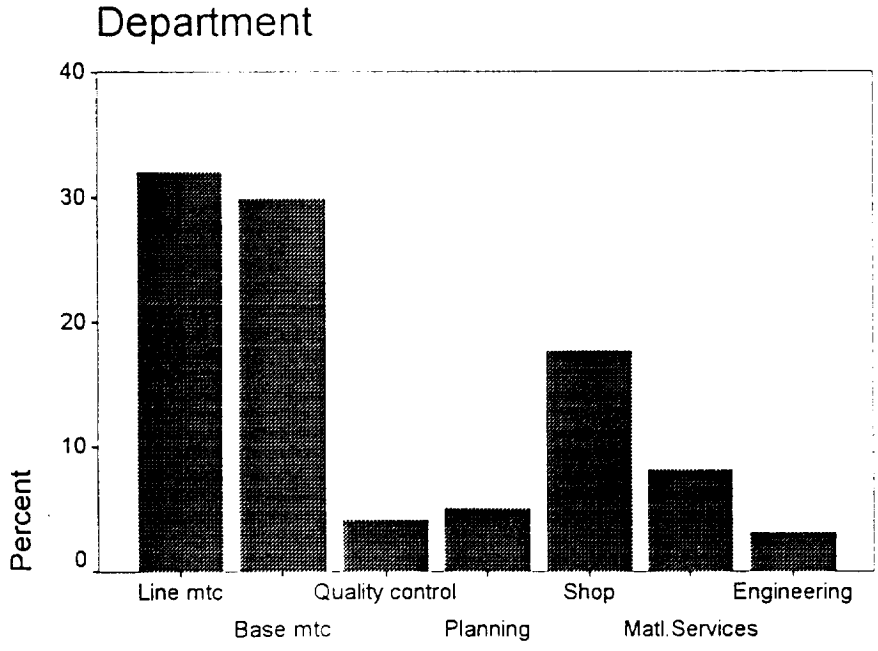
Shift

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Day shift	625	27.0	46.5	46.5
	Afternoon/Swing shift	369	15.9	27.5	74.0
	Night Shift	325	14.0	24.2	98.1
	rotating/all shifts	19	.8	1.4	99.6
	late days	6	.3	.4	100.0
	Total	1344	58.1	100.0	
Missing	7	8	.3		
	8	9	.4		
	9	142	6.1		
	System	811	35.0		
	Total	970	41.9		
Total		2314	100.0		

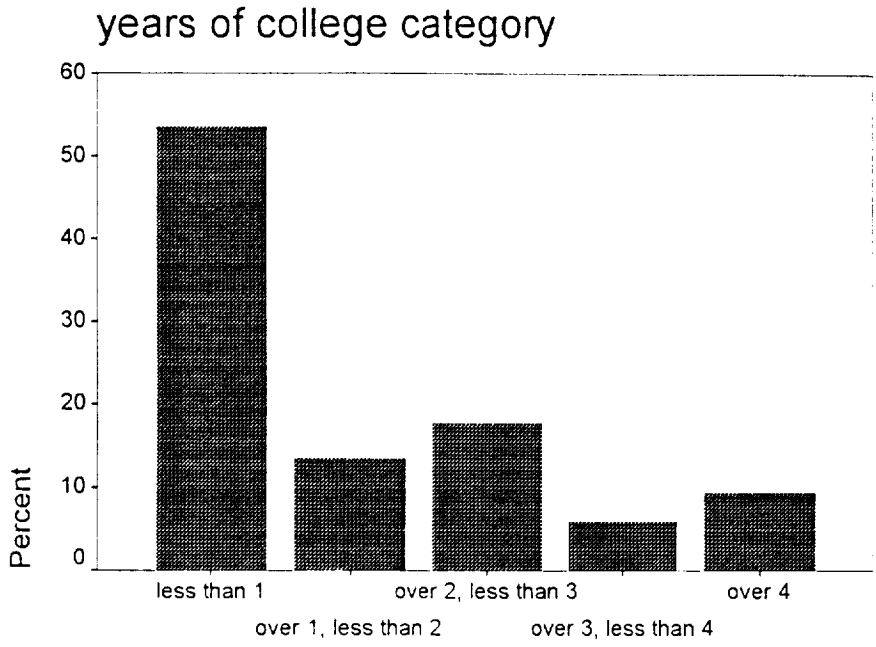
Bar Chart



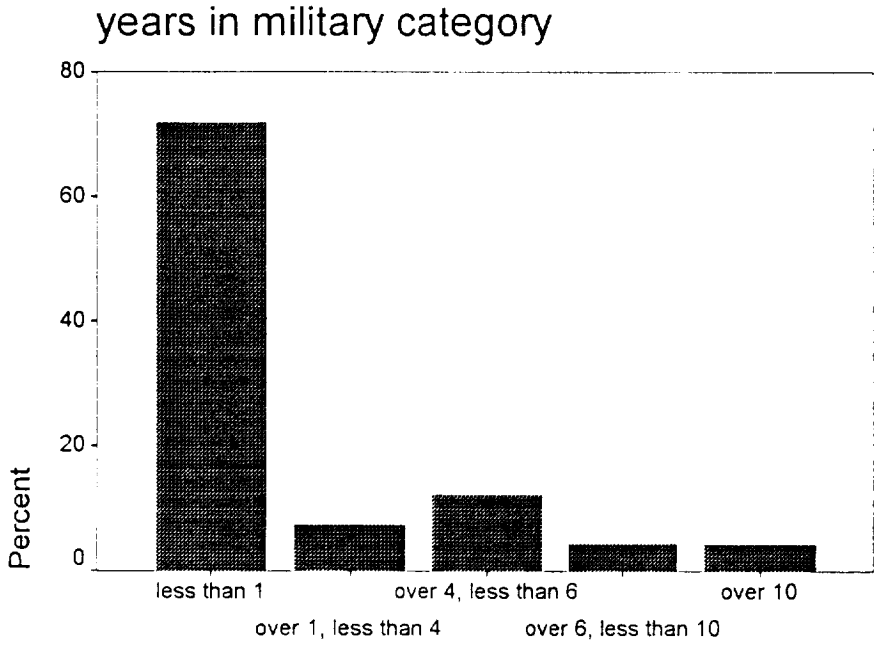
Gender



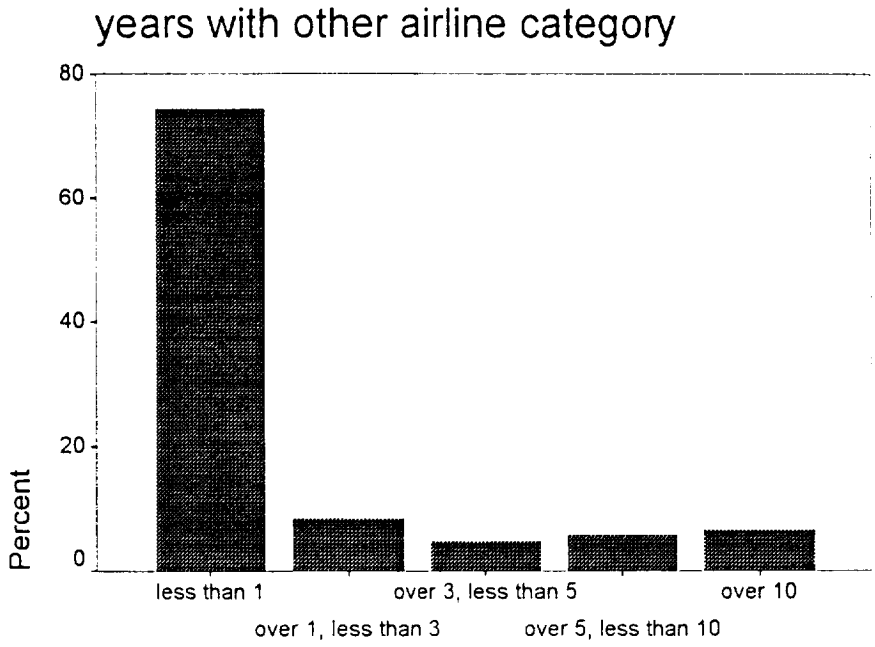
Department



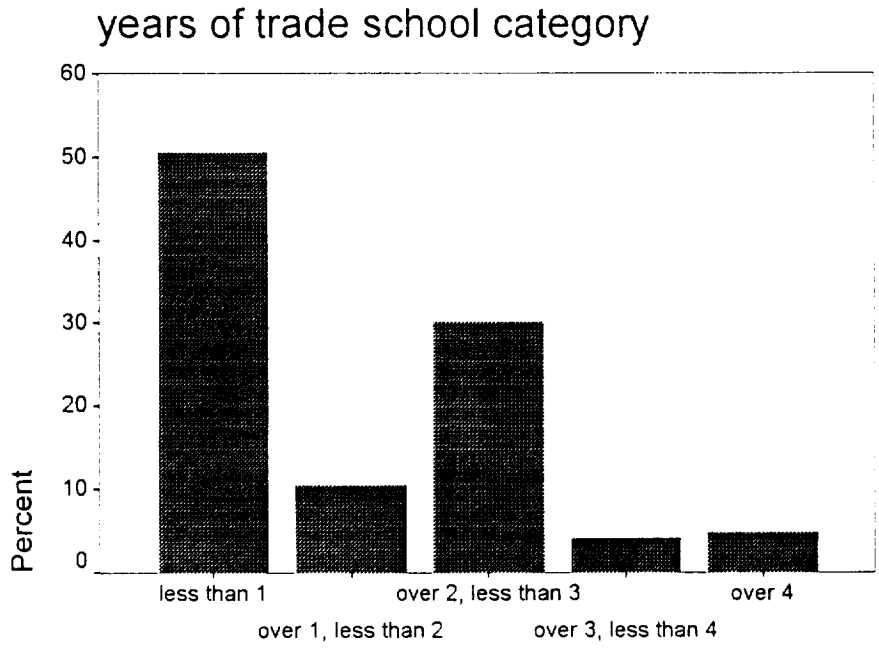
years of college category



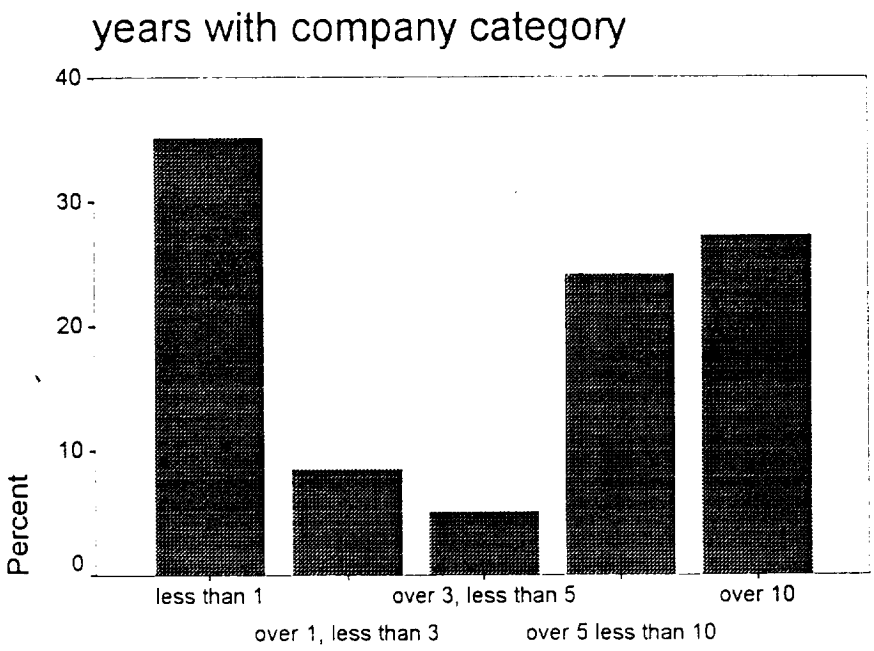
years in military category



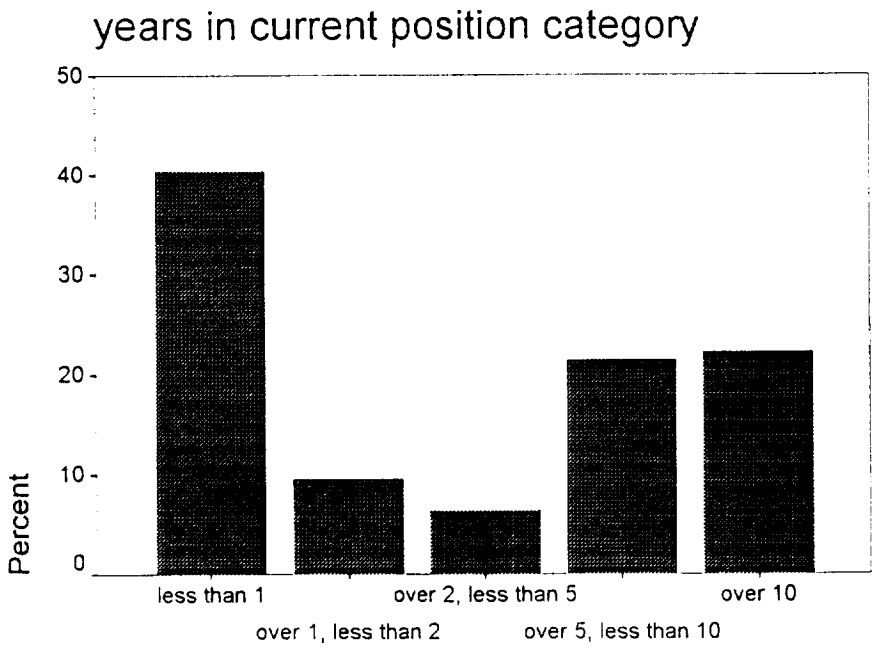
years with other airline category



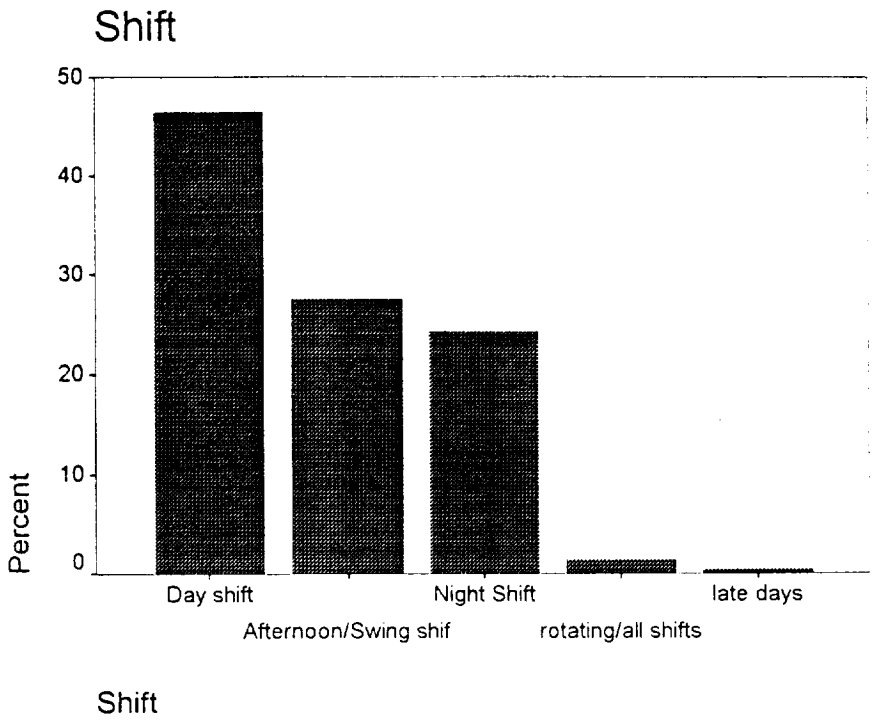
years of trade school category



years with company category



years in current position category


Shift
50
40
30
20
10
0
Percent
Day shift
Afternoon/Swing shif
Night Shift
rotating/all shifts
late days
Shift

Frequencies

Statistics

		Communication & Coordination (2mo)	Recognize Stress Effects (2mo)	Assertiveness (2mo)	Group Goal Attainment (2mo)
N	Valid	2298	2294	2305	2183
	Missing	16	20	9	131
Mean		4.3429	2.8412	3.1662	3.2123
Median		4.5000	2.6667	3.0000	3.3333
Std. Deviation		.6070	.9295	1.1300	.8905
Skewness		-1.220	.120	-.167	-.220
Std. Error of Skewness		.051	.051	.051	.052
Kurtosis		2.030	-.471	-.841	-.365
Std. Error of Kurtosis		.102	.102	.102	.105
Percentiles	10	3.5000	1.6667	1.5000	2.0000
	20	4.0000	2.0000	2.0000	2.5000
	30	4.0000	2.3333	2.5000	2.8333
	40	4.2500	2.6667	3.0000	3.0000
	50	4.5000	2.6667	3.0000	3.3333
	60	4.5000	3.0000	3.5000	3.5000
	70	4.7500	3.3333	4.0000	3.6667
	80	5.0000	3.6667	4.0000	4.0000
	90	5.0000	4.0000	4.5000	4.3333

Statistics

		Safety Climate (2mo)	Share Command Responsibility (2mo
N	Valid	1412	2292
	Missing	902	22
Mean		3.7273	3.2699
Median		3.8000	3.2500
Std. Deviation		.8543	.8983
Skewness		-.585	-.085
Std. Error of Skewness		.065	.051
Kurtosis		-.120	-.526
Std. Error of Kurtosis		.130	.102
Percentiles	10	2.6000	2.0000
	20	3.0000	2.5000
	30	3.4000	2.7500
	40	3.6000	3.0000
	50	3.8000	3.2500
	60	4.0000	3.5000
	70	4.2000	3.7500
	80	4.6000	4.0000
	90	4.8000	4.5000

Frequency Table

Communication & Coordination (2mo)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	2	.1	.1	.1
	1.50	3	.1	.1	.2
	1.75	1	.0	.0	.3
	2.00	6	.3	.3	.5
	2.25	11	.5	.5	1.0
	2.50	15	.6	.7	1.7
	2.75	12	.5	.5	2.2
	3.00	48	2.1	2.1	4.3
	3.25	61	2.6	2.7	6.9
	3.50	120	5.2	5.2	12.1
	3.75	176	7.6	7.7	19.8
	4.00	252	10.9	11.0	30.8
	4.25	306	13.2	13.3	44.1
	4.50	375	16.2	16.3	60.4
	4.75	415	17.9	18.1	78.5
	5.00	495	21.4	21.5	100.0
	Total	2298	99.3	100.0	
Missing	System	16	.7		
Total		2314	100.0		

Recognize Stress Effects (2mo)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	82	3.5	3.6	3.6
	1.33	93	4.0	4.1	7.6
	1.67	170	7.3	7.4	15.0
	2.00	215	9.3	9.4	24.4
	2.33	270	11.7	11.8	36.2
	2.67	336	14.5	14.6	50.8
	3.00	321	13.9	14.0	64.8
	3.33	230	9.9	10.0	74.8
	3.67	232	10.0	10.1	85.0
	4.00	155	6.7	6.8	91.7
	4.33	91	3.9	4.0	95.7
	4.67	52	2.2	2.3	98.0
	5.00	47	2.0	2.0	100.0
	Total	2294	99.1	100.0	
Missing	System	20	.9		
Total		2314	100.0		

Assertiveness (2mo)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	146	6.3	6.3	6.3
	1.50	146	6.3	6.3	12.7
	2.00	240	10.4	10.4	23.1
	2.50	247	10.7	10.7	33.8
	3.00	480	20.7	20.8	54.6
	3.50	226	9.8	9.8	64.4
	4.00	378	16.3	16.4	80.8
	4.50	235	10.2	10.2	91.0
	5.00	207	8.9	9.0	100.0
	Total	2305	99.6	100.0	
Missing	System	9	.4		
Total		2314	100.0		

Group Goal Attainment (2mo)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.33	1	.0	.0	.0
	1.00	25	1.1	1.1	1.2
	1.17	15	.6	.7	1.9
	1.33	23	1.0	1.1	2.9
	1.50	27	1.2	1.2	4.2
	1.67	45	1.9	2.1	6.2
	1.83	52	2.2	2.4	8.6
	2.00	63	2.7	2.9	11.5
	2.17	68	2.9	3.1	14.6
	2.33	98	4.2	4.5	19.1
	2.50	130	5.6	6.0	25.1
	2.67	102	4.4	4.7	29.7
	2.83	120	5.2	5.5	35.2
	3.00	159	6.9	7.3	42.5
	3.17	145	6.3	6.6	49.2
	3.33	167	7.2	7.7	56.8
	3.50	156	6.7	7.1	63.9
	3.67	155	6.7	7.1	71.0
	3.83	140	6.1	6.4	77.5
	4.00	140	6.1	6.4	83.9
	4.17	97	4.2	4.4	88.3
	4.33	70	3.0	3.2	91.5
	4.50	55	2.4	2.5	94.0
	4.67	39	1.7	1.8	95.8
	4.83	40	1.7	1.8	97.7
	5.00	51	2.2	2.3	100.0
	Total	2183	94.3	100.0	
Missing	System	131	5.7		
Total		2314	100.0		

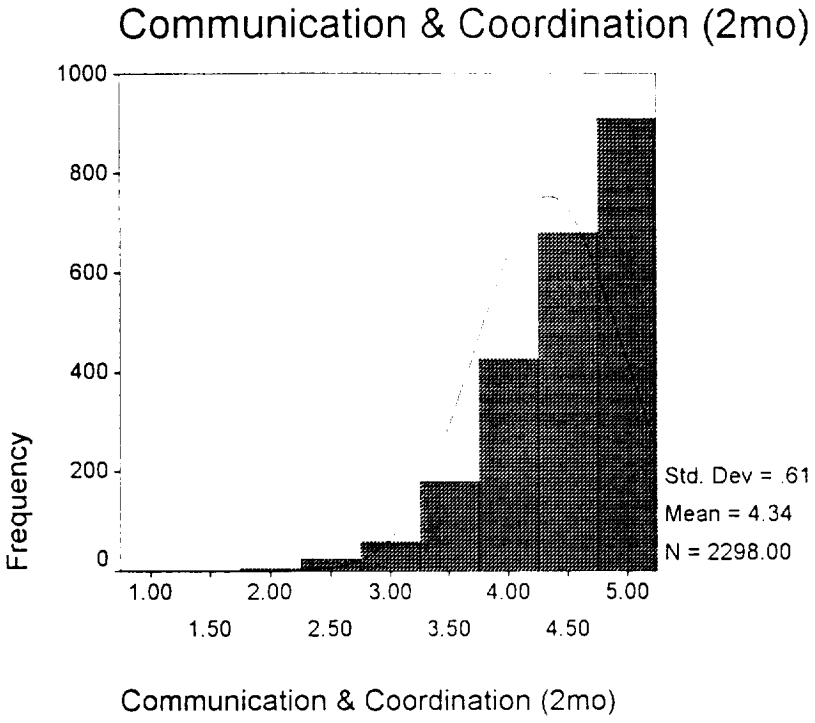
Safety Climate (2mo)

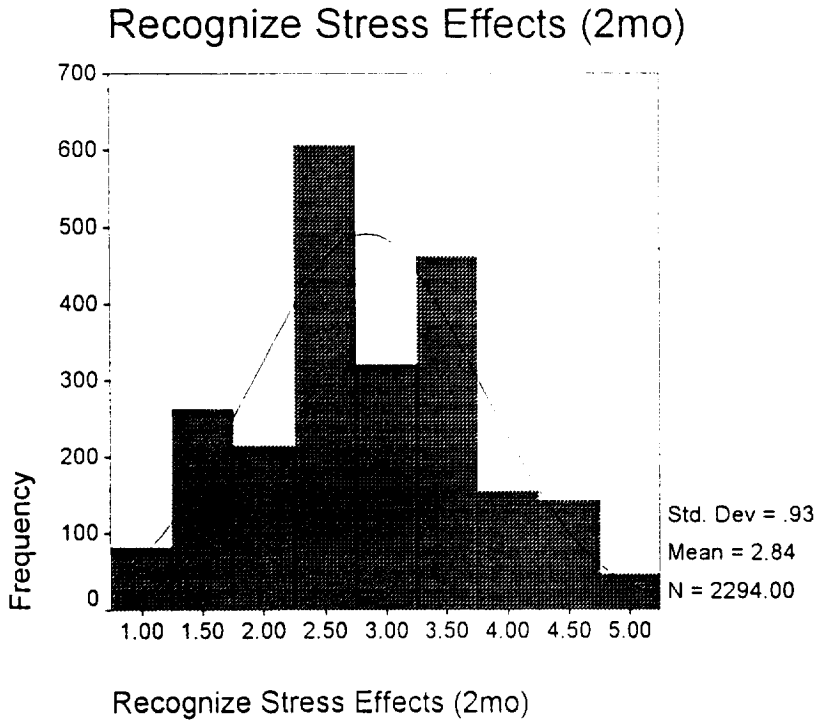
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	6	.3	.4	.4
	1.20	2	.1	.1	.6
	1.40	9	.4	.6	1.2
	1.60	5	.2	.4	1.6
	1.80	15	.6	1.1	2.6
	2.00	35	1.5	2.5	5.1
	2.20	28	1.2	2.0	7.1
	2.40	29	1.3	2.1	9.1
	2.60	48	2.1	3.4	12.5
	2.80	64	2.8	4.5	17.1
	3.00	94	4.1	6.7	23.7
	3.20	72	3.1	5.1	28.8
	3.40	95	4.1	6.7	35.6
	3.60	121	5.2	8.6	44.1
	3.80	127	5.5	9.0	53.1
	4.00	126	5.4	8.9	62.0
	4.20	137	5.9	9.7	71.7
	4.40	109	4.7	7.7	79.5
	4.60	118	5.1	8.4	87.8
	4.80	68	2.9	4.8	92.6
	5.00	104	4.5	7.4	100.0
	Total	1412	61.0	100.0	
Missing	System	902	39.0		
Total		2314	100.0		

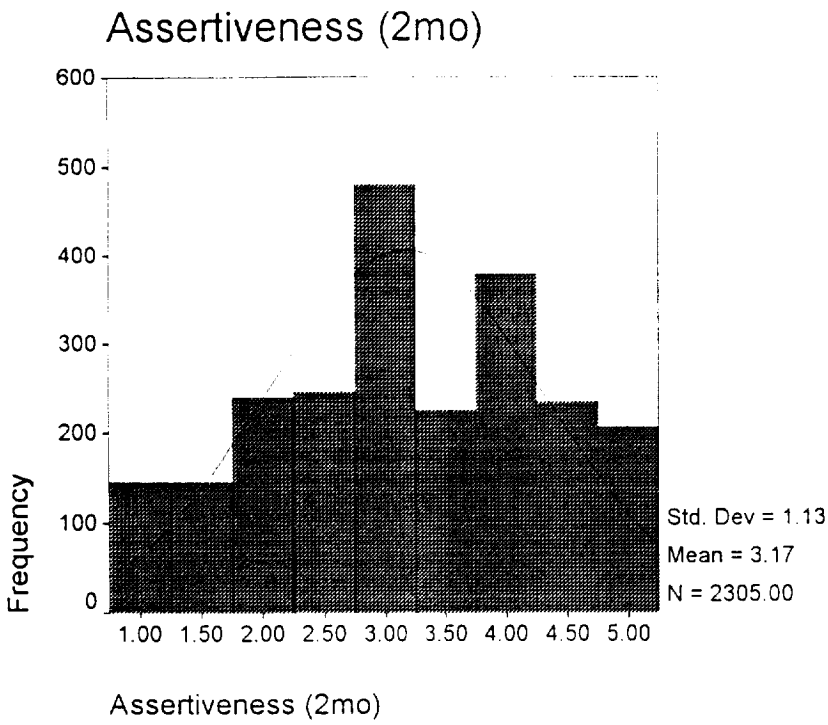
Share Command Responsibility (2mo

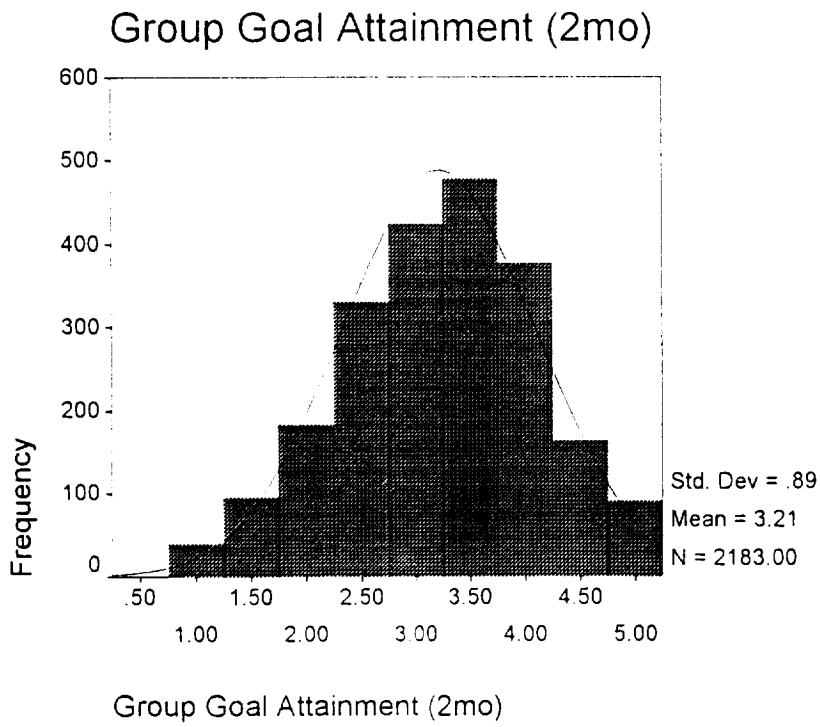
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	24	1.0	1.0	1.0
	1.25	14	.6	.6	1.7
	1.50	32	1.4	1.4	3.1
	1.75	65	2.8	2.8	5.9
	2.00	121	5.2	5.3	11.2
	2.25	127	5.5	5.5	16.7
	2.50	184	8.0	8.0	24.7
	2.75	197	8.5	8.6	33.3
	3.00	264	11.4	11.5	44.9
	3.25	217	9.4	9.5	54.3
	3.50	222	9.6	9.7	64.0
	3.75	210	9.1	9.2	73.2
	4.00	196	8.5	8.6	81.7
	4.25	140	6.1	6.1	87.8
	4.50	96	4.1	4.2	92.0
	4.75	104	4.5	4.5	96.6
	5.00	79	3.4	3.4	100.0
	Total	2292	99.0	100.0	
Missing	System	22	1.0		
Total		2314	100.0		

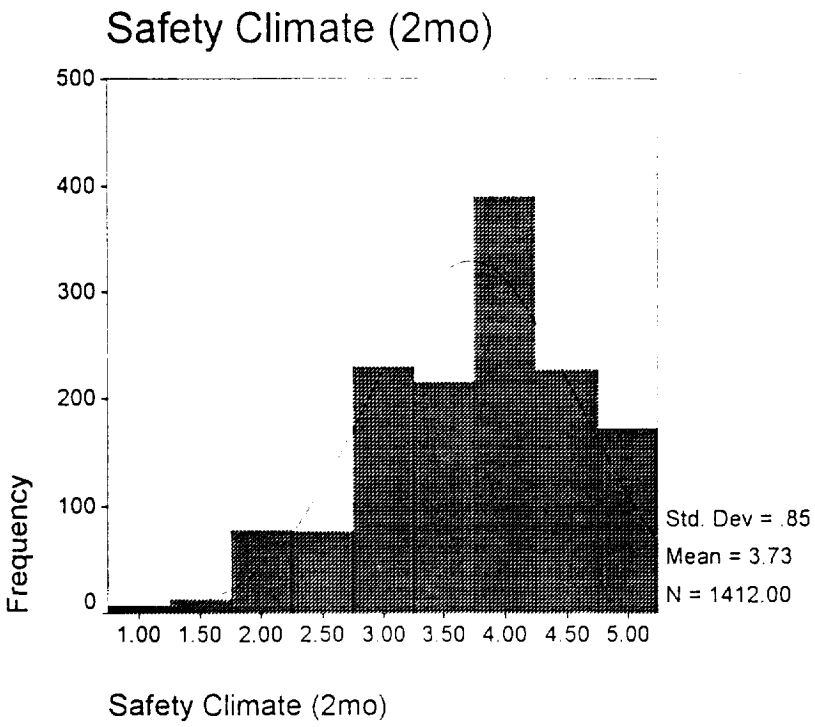
Histogram

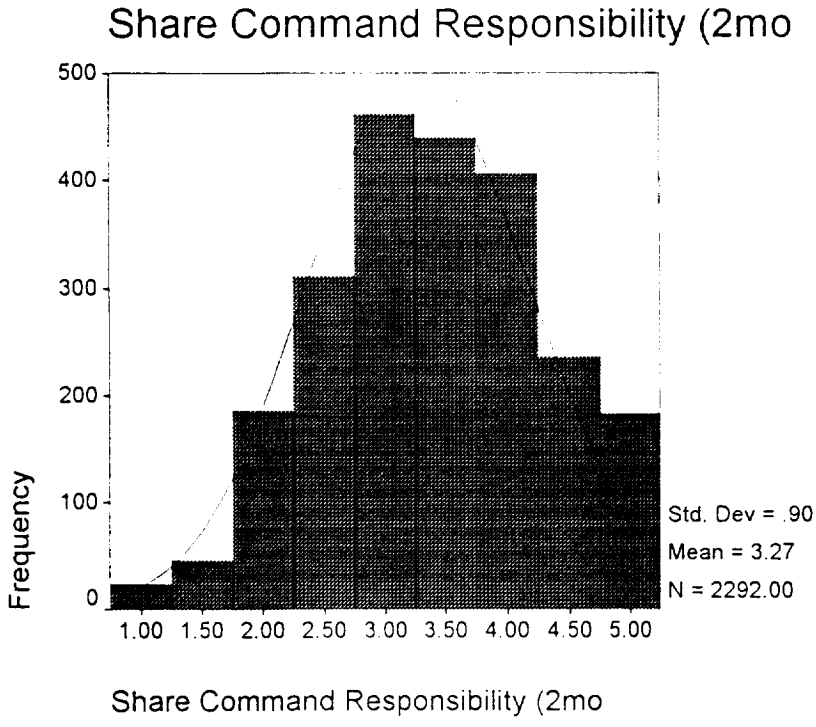

Communication & Coordination (2mo)
Frequency
1000
800
600
400
200
0
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
Std. Dev = .61
Mean = 4.34
N = 2298.00
Communication & Coordination (2mo)


Recognize Stress Effects (2mo)
Frequency
700
600
500
400
300
200
100
0
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
Std. Dev = .93
Mean = 2.84
N = 2294.00
Recognize Stress Effects (2mo)


Assertiveness (2mo)
600
500
400
300
200
100
0
Frequency
1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00
Std. Dev = 1.13
Mean = 3.17
N = 2305.00
Assertiveness (2mo)


Group Goal Attainment (2mo)
600
500
400
300
200
100
0
Frequency
.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00
Std. Dev = .89
Mean = 3.21
N = 2183.00
Group Goal Attainment (2mo)


Safety Climate (2mo)
Frequency
500
400
300
200
100
0
1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00
Std. Dev = .85
Mean = 3.73
N = 1412.00
Safety Climate (2mo)


Share Command Responsibility (2mo
Frequency
500
400
300
200
100
0
1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00
Std. Dev = .90
Mean = 3.27
N = 2292.00
Share Command Responsibility (2mo

MRM Standard Profile
6-Month Follow-up Survey
11/30/98

Frequencies

Statistics

		Share Command Responsibility (6mo)	Communication & Coordination (6mo)	Recognize Stress Effects (6mo)	Assertiveness (6mo)	Group Goal Attainment (6mo)
N	Valid	1438	1435	1442	1458	1436
	Missing	38	41	34	18	40
Mean		3.1850	4.1544	2.8393	3.0706	3.0653
Median		3.2500	4.2500	2.6667	3.0000	3.1667
Std. Deviation		.8423	.6956	.9343	1.1240	.8988
Minimum		1.00	1.00	1.00	1.00	1.00
Maximum		5.00	5.00	5.00	5.00	5.00
Percentiles	25	2.5000	3.7500	2.3333	2.0000	2.5000
	50	3.2500	4.2500	2.6667	3.0000	3.1667
	75	3.7500	4.7500	3.3333	4.0000	3.6667

Statistics

		Safety Climate (6mo)	Gender	Department	Job Title	age category	years of college category
N	Valid	1362	1345	1203	1335	902	1098
	Missing	114	131	273	141	574	378
Mean		3.6604	1.04	2.33	59.87	4.09	2.38
Median		3.8000	1.00	2.00	70.00	4.00	2.00
Std. Deviation		.8979	.19	1.71	24.82	94	1.48
Minimum		1.00	1	1	1	1	1
Maximum		5.00	2	7	104	5	5
Percentiles	25	3.0000	1.00	1.00	70.00	4.00	1.00
	50	3.8000	1.00	2.00	70.00	4.00	2.00
	75	4.4000	1.00	5.00	70.00	5.00	3.00

Statistics

		years in military category	years with other airline category	years of trade school category	years with company category	years in current position category	Shift
N	Valid	1172	1151	1053	952	1343	1277
	Missing	304	325	423	524	133	199
Mean		1.92	1.76	2.34	4.35	3.76	1.78
Median		1.00	1.00	3.00	5.00	4.00	2.00
Std. Deviation		1.27	1.29	1.26	.97	1.30	.85
Minimum		1	1	1	1	1	1
Maximum		5	5	5	5	5	6
Percentiles	25	1.00	1.00	1.00	4.00	3.00	1.00
	50	1.00	1.00	3.00	5.00	4.00	2.00
	75	3.00	2.00	3.00	5.00	5.00	2.00

Frequency Table

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	1297	87.9	96.4	96.4
	female	48	3.3	3.6	100.0
	Total	1345	91.1	100.0	
Missing	8	1	.1		
	9	127	8.6		
	System	3	.2		
	Total	131	8.9		
Total		1476	100.0		

Department

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Line mtc	584	39.6	48.5	48.5
	Base mtc	290	19.6	24.1	72.7
	Quality control	27	1.8	2.2	74.9
	Planning	1	.1	.1	75.0
	Shop	254	17.2	21.1	96.1
	Matl.Services	46	3.1	3.8	99.9
	Engineering	1	.1	.1	100.0
	Total	1203	81.5	100.0	
Missing	other	114	7.7		
	missing	121	8.2		
	System	38	2.6		
	Total	273	18.5		
Total		1476	100.0		

Job Title

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Supervisor	12	.8	.9	.9
	Assistant Sup	148	10.0	11.1	12.0
	Manager	14	.9	1.0	13.0
	Engineer	2	.1	.1	13.2
	Planner	4	.3	.3	13.5
	Instructor	19	1.3	1.4	14.9
	Analyst	5	.3	.4	15.3
	Controller	4	.3	.3	15.6
	Specialist	5	.3	.4	16.0
	Mx Representative	7	.5	.5	16.5
	Scheduler	1	.1	.1	16.6
	52	1	.1	.1	16.6
	Coordinator	9	.6	.7	17.3
	Quality Assurance	1	.1	.1	17.4
	Mechanic	1002	67.9	75.1	92.4
	Inspector	31	2.1	2.3	94.8
	Clerk	7	.5	.5	95.3
	Storekeeper	39	2.6	2.9	98.2
	Cleaner	8	.5	.6	98.8
	Station Mx Controller	1	.1	.1	98.9
	Ramp Serviceman	1	.1	.1	99.0
	Team Coordinator	8	.5	.6	99.6
	Tool Maintenance	1	.1	.1	99.6
	89	1	.1	.1	99.7
	104	4	.3	.3	100.0
	Total	1335	90.4	100.0	
Missing	888	28	1.9		
	999	110	7.5		
	System	3	.2		
	Total	141	9.6		
Total		1476	100.0		

age category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 25	14	.9	1.6	1.6
	over 25, less than 30	42	2.8	4.7	6.2
	over 30, less than 35	147	10.0	16.3	22.5
	over 35, less than 45	341	23.1	37.8	60.3
	over 45	358	24.3	39.7	100.0
	Total	902	61.1	100.0	
Missing	System	574	38.9		
Total		1476	100.0		

years of college category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1	497	33.7	45.3	45.3
	over 1, less than 2	104	7.0	9.5	54.7
	over 2, less than 3	239	16.2	21.8	76.5
	over 3, less than 4	98	6.6	8.9	85.4
	over 4	160	10.8	14.6	100.0
	Total	1098	74.4	100.0	
Missing	System	378	25.6		
Total		1476	100.0		

years in military category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1	693	47.0	59.1	59.1
	over 1, less than 4	104	7.0	8.9	68.0
	over 4, less than 6	226	15.3	19.3	87.3
	over 6, less than 10	75	5.1	6.4	93.7
	over 10	74	5.0	6.3	100.0
	Total	1172	79.4	100.0	
Missing	System	304	20.6		
Total		1476	100.0		

years with other airline category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1	786	53.3	68.3	68.3
	over 1, less than 3	115	7.8	10.0	78.3
	over 3, less than 5	75	5.1	6.5	84.8
	over 5, less than 10	92	6.2	8.0	92.8
	over 10	83	5.6	7.2	100.0
	Total	1151	78.0	100.0	
Missing	System	325	22.0		
Total		1476	100.0		

years of trade school category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1	413	28.0	39.2	39.2
	over 1, less than 2	96	6.5	9.1	48.3
	over 2, less than 3	397	26.9	37.7	86.0
	over 3, less than 4	69	4.7	6.6	92.6
	over 4	78	5.3	7.4	100.0
	Total	1053	71.3	100.0	
Missing	System	423	28.7		
Total		1476	100.0		

years with company category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1	8	.5	.8	.8
	over 1, less than 3	87	5.9	9.1	10.0
	over 3, less than 5	28	1.9	2.9	12.9
	over 5 less than 10	271	18.4	28.5	41.4
	over 10	558	37.8	58.6	100.0
	Total	952	64.5	100.0	
Missing	System	524	35.5		
Total		1476	100.0		

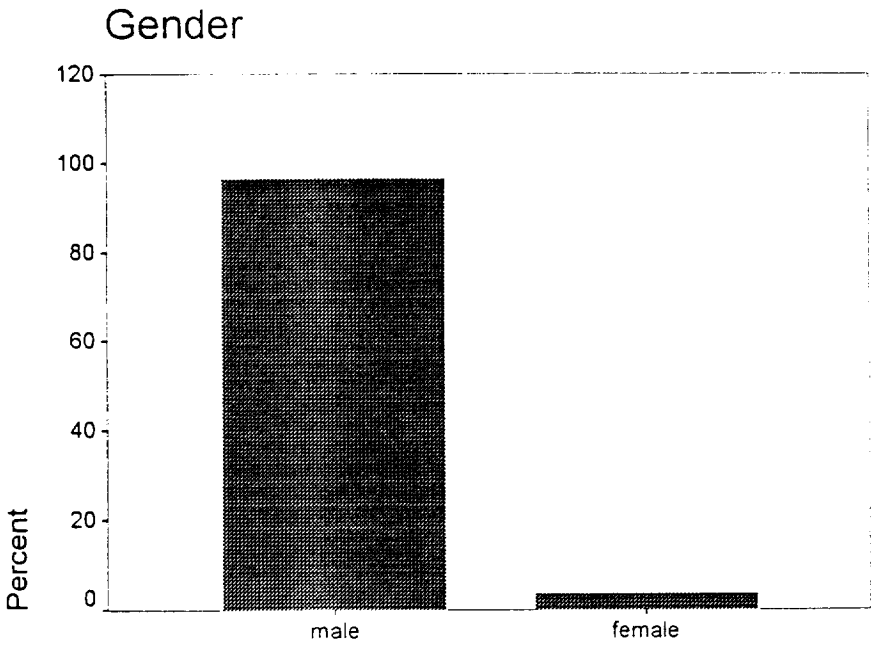
years in current position category

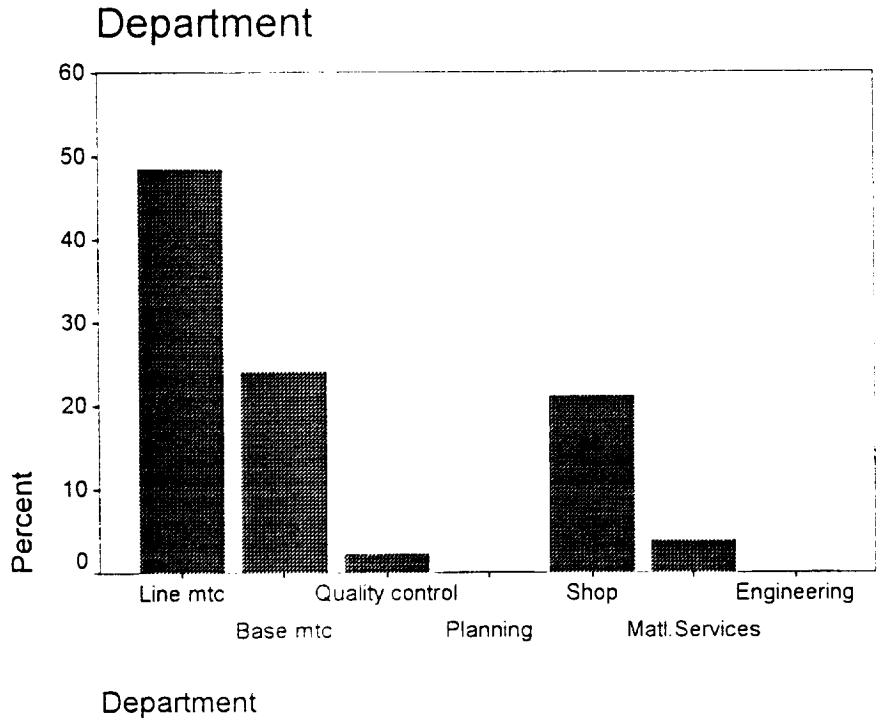
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1	84	5.7	6.3	6.3
	over 1, less than 2	239	16.2	17.8	24.1
	over 2, less than 5	111	7.5	8.3	32.3
	over 5, less than 10	396	26.8	29.5	61.8
	over 10	513	34.8	38.2	100.0
	Total	1343	91.0	100.0	
Missing	System	133	9.0		
Total		1476	100.0		

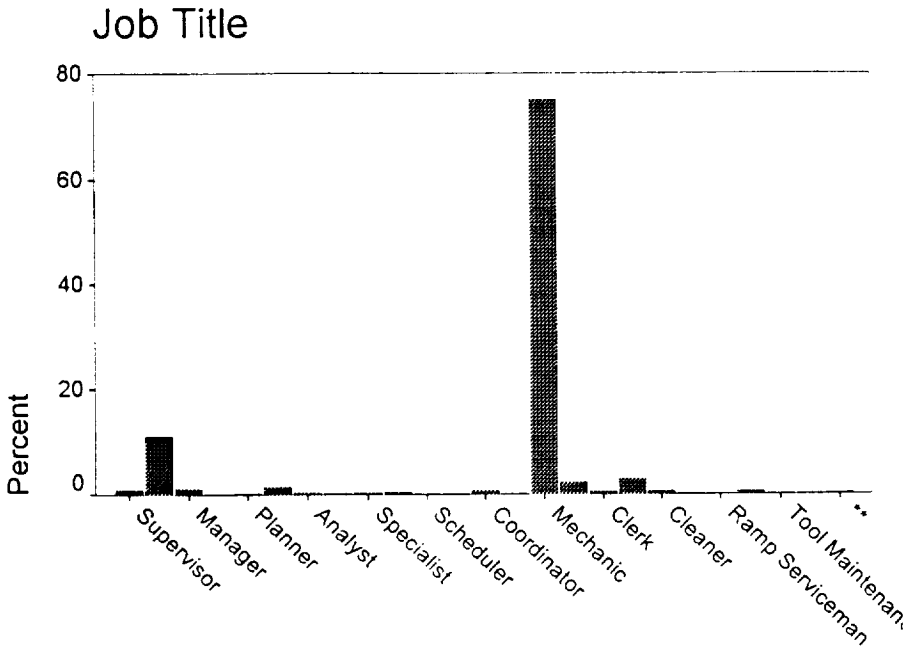
Shift

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Day shift	595	40.3	46.6	46.6
	Afternoon/Swing shift	388	26.3	30.4	77.0
	Night Shift	280	19.0	21.9	98.9
	to be determined	9	.6	.7	99.6
	rotating/all shifts	2	.1	.2	99.8
	late days	3	.2	.2	100.0
	Total	1277	86.5	100.0	
Missing	7	11	.7		
	8	16	1.1		
	9	169	11.4		
	System	3	.2		
	Total	199	13.5		
Total		1476	100.0		

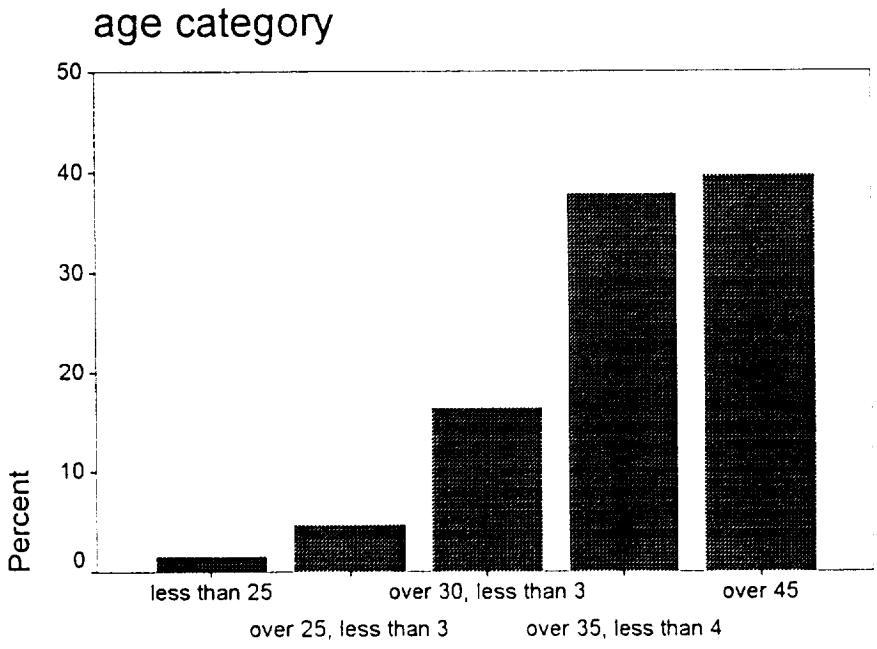
Bar Chart


Gender
120
100
80
60
40
20
0
Percent
male
female
Gender

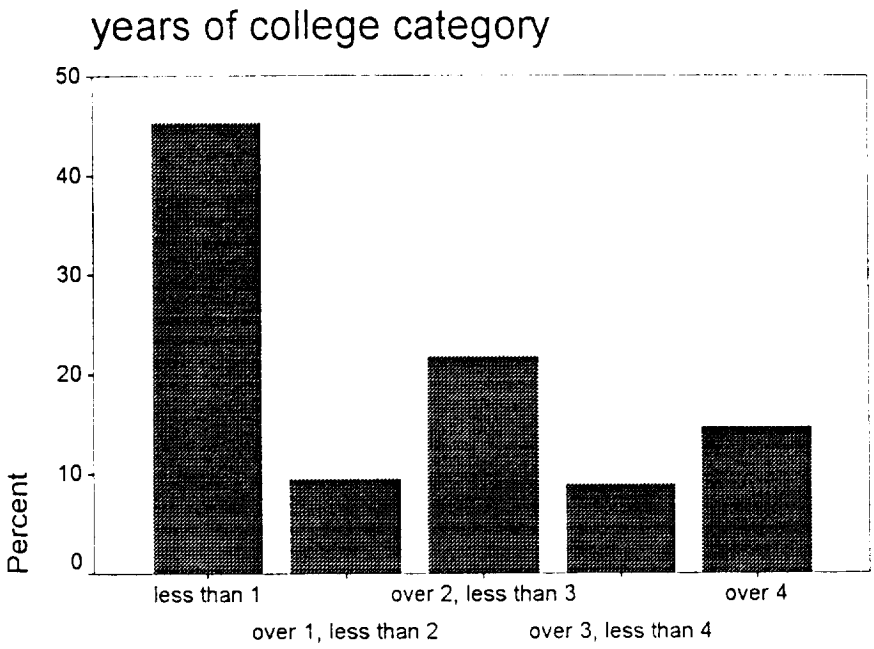

Department
60
50
40
30
20
10
0
Percent
Line mtc
Base mtc
Quality control
Planning
Shop
Matl.Services
Engineering
Department



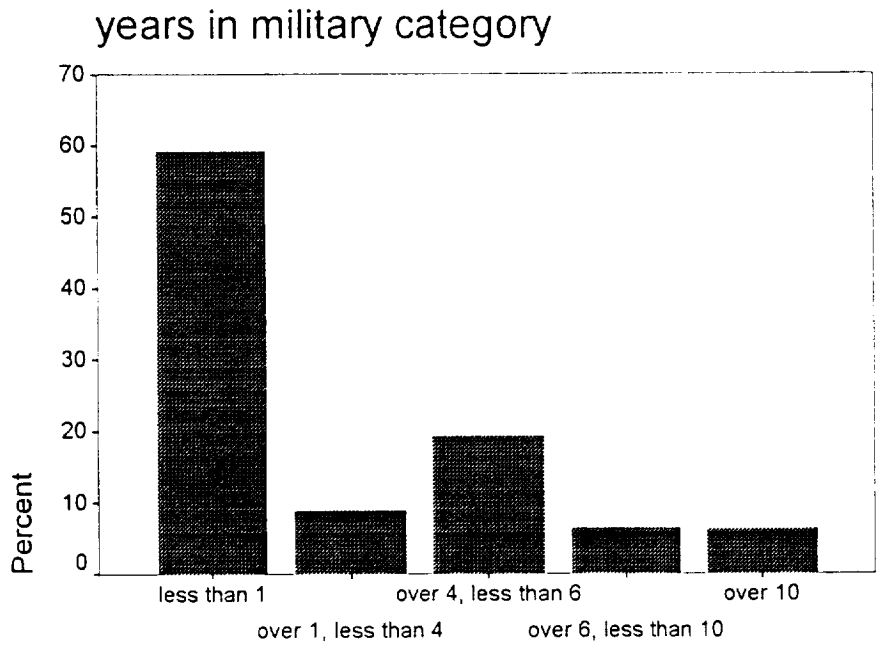
Job Title



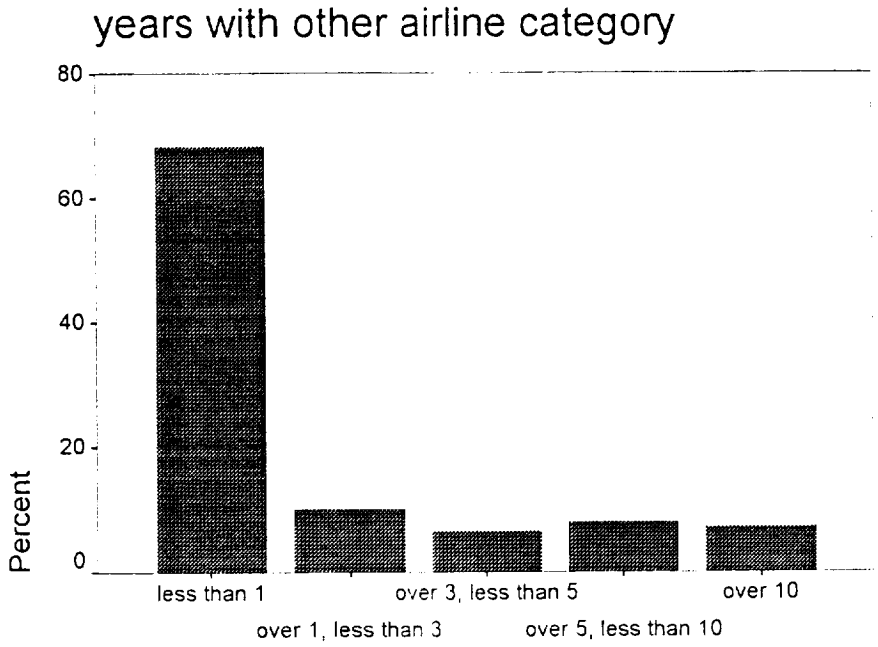
age category



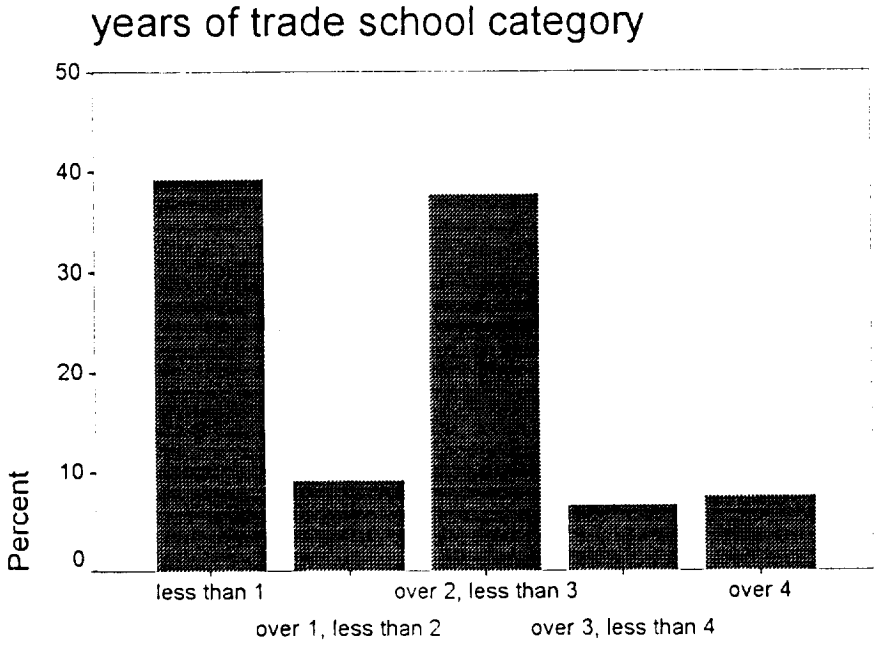
years of college category



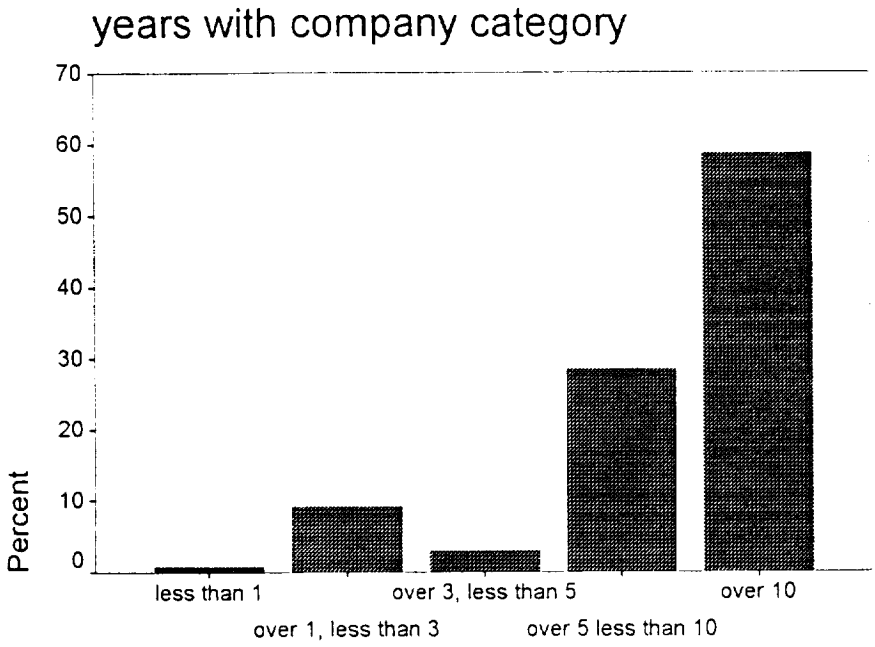
years in military category



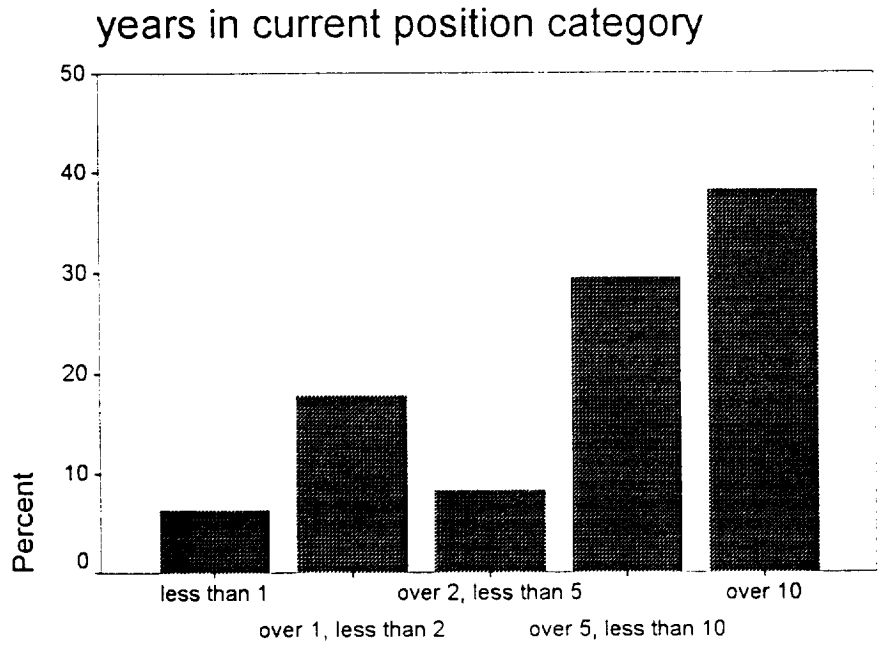
years with other airline category



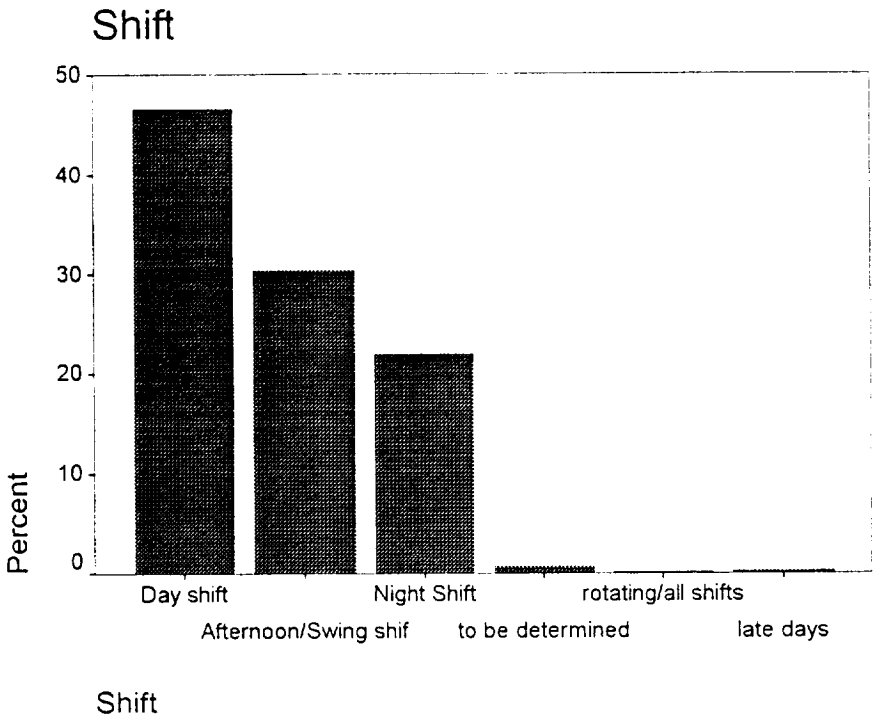
years of trade school category



years with company category



years in current position category


Shift
50
40
30
20
10
0
Percent
Day shift
Afternoon/Swing shif
Night Shift
to be determined
rotating/all shifts
late days
Shift

Frequencies

Statistics

		Communication & Coordination (6mo)	Recognize Stress Effects (6mo)	Assertiveness (6mo)	Group Goal Attainment (6mo)
N	Valid	1435	1442	1458	1436
	Missing	41	34	18	40
Mean		4.1544	2.8393	3.0706	3.0653
Median		4.2500	2.6667	3.0000	3.1667
Std. Deviation		.6956	.9343	1.1240	.8988
Skewness		-1.149	.210	-.060	-.152
Std. Error of Skewness		.065	.064	.064	.065
Kurtosis		2.169	-.448	-.886	-.457
Std. Error of Kurtosis		.129	.129	.128	.129
Percentiles	10	3.2500	1.6667	1.5000	1.8333
	20	3.5500	2.0000	2.0000	2.3333
	30	4.0000	2.3333	2.5000	2.6667
	40	4.0000	2.6667	3.0000	2.8333
	50	4.2500	2.6667	3.0000	3.1667
	60	4.5000	3.0000	3.5000	3.3333
	70	4.5000	3.3333	4.0000	3.5000
	80	4.7500	3.6667	4.0000	3.8333
	90	5.0000	4.0000	4.5000	4.1667

Statistics

		Safety Climate (6mo)	Share Command Responsibility (6mo)
N	Valid	1362	1438
	Missing	114	38
Mean		3.6604	3.1850
Median		3.8000	3.2500
Std. Deviation		.8979	.8423
Skewness		-.526	-.020
Std. Error of Skewness		.066	.065
Kurtosis		-.253	-.295
Std. Error of Kurtosis		.133	.129
Percentiles	10	2.4000	2.0000
	20	3.0000	2.5000
	30	3.2000	2.7500
	40	3.4000	3.0000
	50	3.8000	3.2500
	60	4.0000	3.5000
	70	4.2000	3.5000
	80	4.4000	4.0000
	90	4.8000	4.2500

Frequency Table

Communication & Coordination (6mo)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	8	.5	.6	.6
	1.25	2	.1	.1	.7
	1.75	4	.3	.3	1.0
	2.00	3	.2	.2	1.2
	2.25	9	.6	.6	1.8
	2.50	13	.9	.9	2.7
	2.75	21	1.4	1.5	4.2
	3.00	53	3.6	3.7	7.9
	3.25	67	4.5	4.7	12.5
	3.50	107	7.2	7.5	20.0
	3.75	137	9.3	9.5	29.5
	4.00	192	13.0	13.4	42.9
	4.25	205	13.9	14.3	57.2
	4.50	185	12.5	12.9	70.1
	4.75	217	14.7	15.1	85.2
	5.00	212	14.4	14.8	100.0
	Total	1435	97.2	100.0	
Missing	System	41	2.8		
Total		1476	100.0		

Recognize Stress Effects (6mo)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	44	3.0	3.1	3.1
	1.33	61	4.1	4.2	7.3
	1.67	103	7.0	7.1	14.4
	2.00	143	9.7	9.9	24.3
	2.33	203	13.8	14.1	38.4
	2.67	195	13.2	13.5	51.9
	3.00	187	12.7	13.0	64.9
	3.33	149	10.1	10.3	75.2
	3.67	142	9.6	9.8	85.1
	4.00	85	5.8	5.9	91.0
	4.33	57	3.9	4.0	94.9
	4.67	38	2.6	2.6	97.6
	5.00	35	2.4	2.4	100.0
	Total	1442	97.7	100.0	
Missing	System	34	2.3		
Total		1476	100.0		

Assertiveness (6mo)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	94	6.4	6.4	6.4
	1.50	105	7.1	7.2	13.6
	2.00	187	12.7	12.8	26.5
	2.50	177	12.0	12.1	38.6
	3.00	265	18.0	18.2	56.8
	3.50	164	11.1	11.2	68.0
	4.00	229	15.5	15.7	83.7
	4.50	122	8.3	8.4	92.1
	5.00	115	7.8	7.9	100.0
	Total	1458	98.8	100.0	
Missing	System	18	1.2		
Total		1476	100.0		

Group Goal Attainment (6mo)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	26	1.8	1.8	1.8
	1.17	14	.9	1.0	2.8
	1.33	22	1.5	1.5	4.3
	1.50	23	1.6	1.6	5.9
	1.67	35	2.4	2.4	8.4
	1.83	45	3.0	3.1	11.5
	2.00	52	3.5	3.6	15.1
	2.17	68	4.6	4.7	19.8
	2.33	60	4.1	4.2	24.0
	2.50	76	5.1	5.3	29.3
	2.67	74	5.0	5.2	34.5
	2.83	98	6.6	6.8	41.3
	3.00	115	7.8	8.0	49.3
	3.17	113	7.7	7.9	57.2
	3.33	95	6.4	6.6	63.8
	3.50	91	6.2	6.3	70.1
	3.67	92	6.2	6.4	76.5
	3.83	73	4.9	5.1	81.6
	4.00	78	5.3	5.4	87.0
	4.17	54	3.7	3.8	90.8
	4.33	42	2.8	2.9	93.7
	4.50	30	2.0	2.1	95.8
	4.67	24	1.6	1.7	97.5
	4.83	16	1.1	1.1	98.6
	5.00	20	1.4	1.4	100.0
	Total	1436	97.3	100.0	
Missing	System	40	2.7		
Total		1476	100.0		

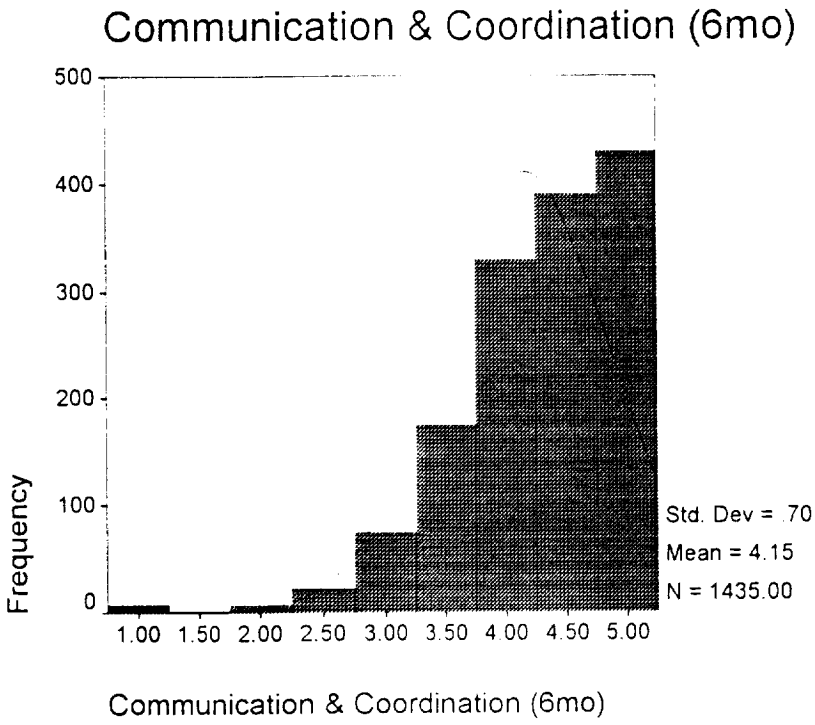
Safety Climate (6mo)

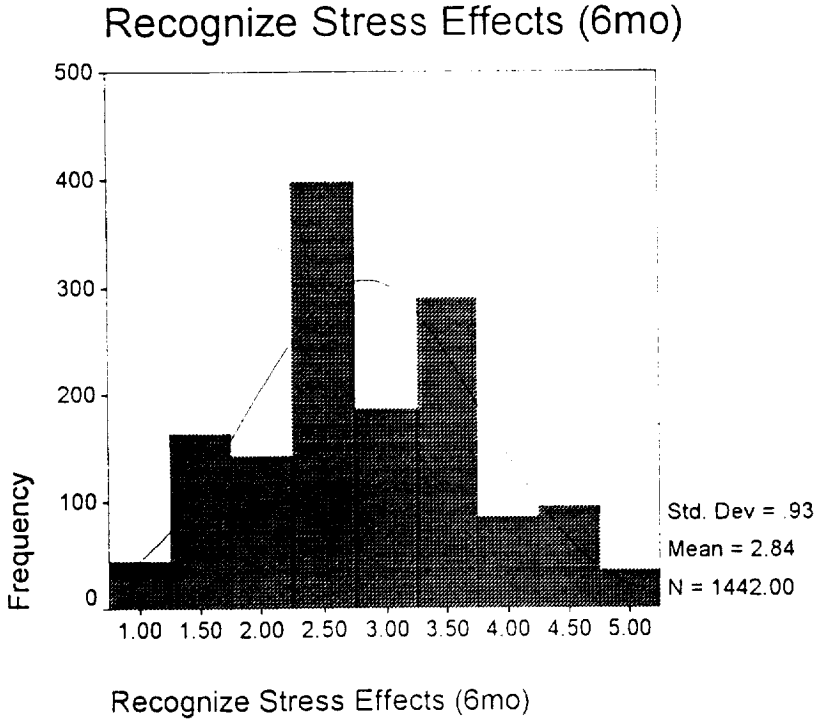
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	8	.5	.6	.6
	1.20	4	.3	.3	.9
	1.40	11	.7	.8	1.7
	1.60	10	.7	.7	2.4
	1.80	25	1.7	1.8	4.3
	2.00	21	1.4	1.5	5.8
	2.20	37	2.5	2.7	8.5
	2.40	37	2.5	2.7	11.2
	2.60	60	4.1	4.4	15.6
	2.80	54	3.7	4.0	19.6
	3.00	84	5.7	6.2	25.8
	3.20	85	5.8	6.2	32.0
	3.40	112	7.6	8.2	40.2
	3.60	113	7.7	8.3	48.5
	3.80	98	6.6	7.2	55.7
	4.00	117	7.9	8.6	64.3
	4.20	116	7.9	8.5	72.8
	4.40	101	6.8	7.4	80.2
	4.60	84	5.7	6.2	86.4
	4.80	91	6.2	6.7	93.1
	5.00	94	6.4	6.9	100.0
	Total	1362	92.3	100.0	
Missing	System	114	7.7		
Total		1476	100.0		

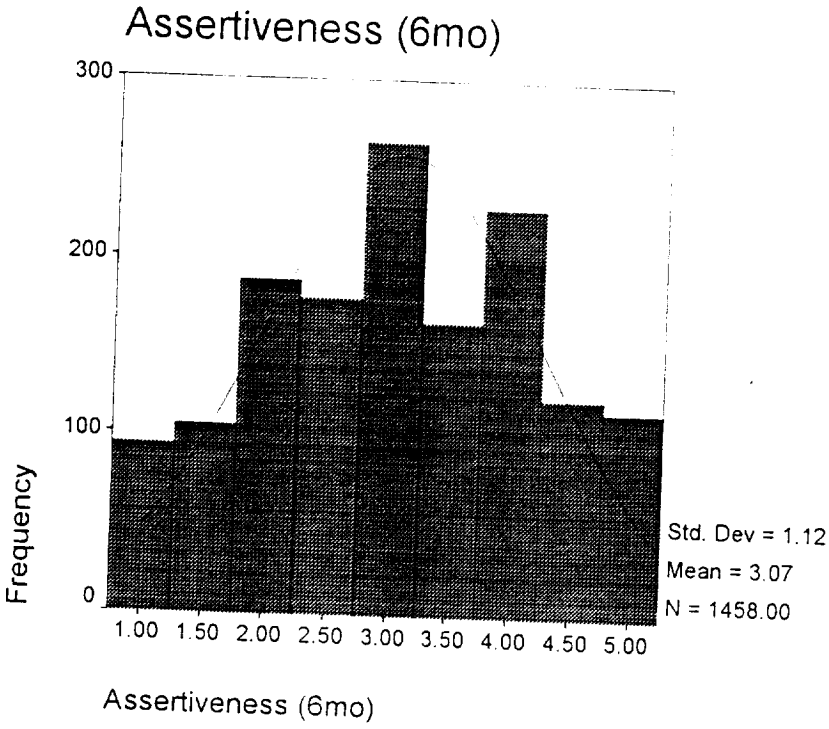
Share Command Responsibility (6mo)

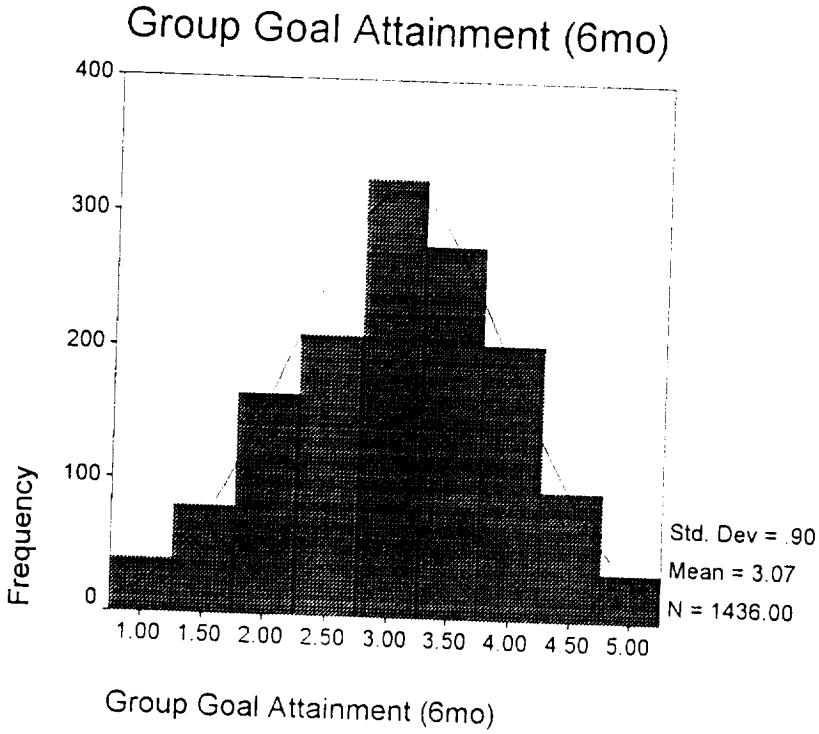
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	13	.9	.9	.9
	1.25	9	.6	.6	1.5
	1.50	24	1.6	1.7	3.2
	1.75	42	2.8	2.9	6.1
	2.00	66	4.5	4.6	10.7
	2.25	82	5.6	5.7	16.4
	2.50	129	8.7	9.0	25.4
	2.75	141	9.6	9.8	35.2
	3.00	188	12.7	13.1	48.3
	3.25	163	11.0	11.3	59.6
	3.50	153	10.4	10.6	70.2
	3.75	125	8.5	8.7	78.9
	4.00	105	7.1	7.3	86.2
	4.25	69	4.7	4.8	91.0
	4.50	52	3.5	3.6	94.6
	4.75	43	2.9	3.0	97.6
	5.00	34	2.3	2.4	100.0
	Total	1438	97.4	100.0	
Missing	System	38	2.6		
Total		1476	100.0		

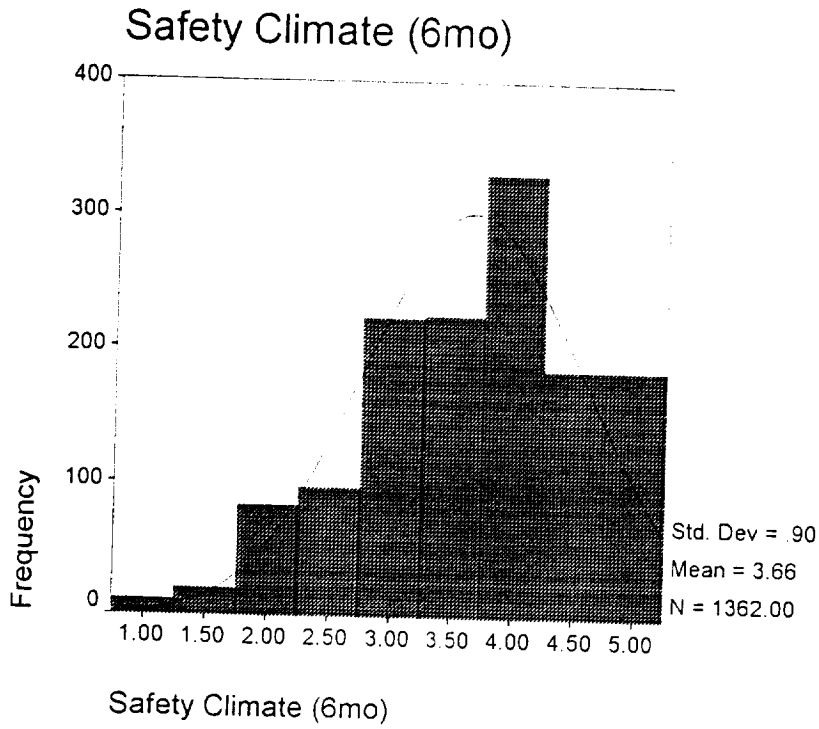
Histogram

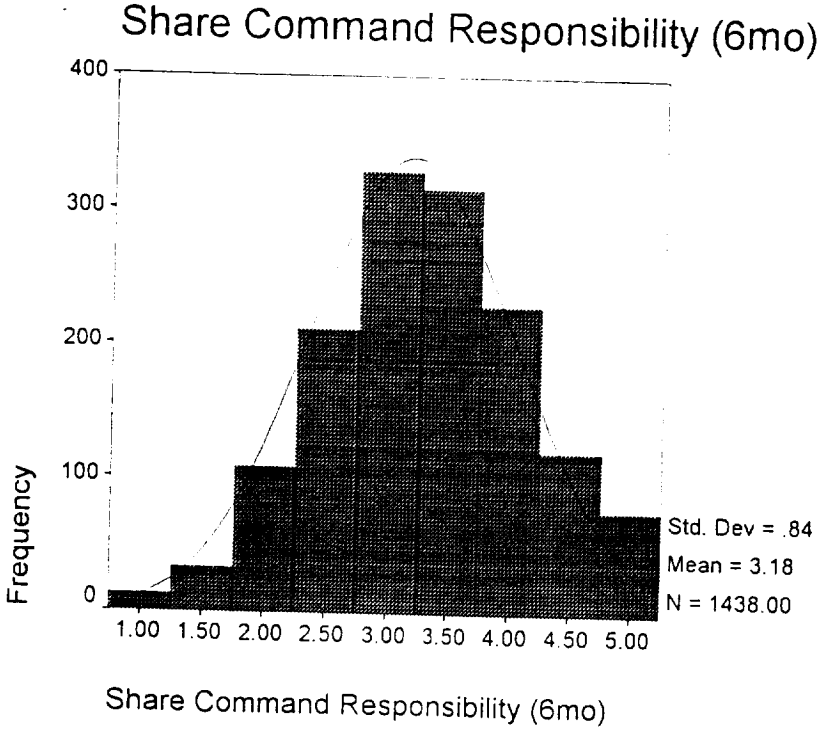

Communication & Coordination (6mo)
Frequency
500
400
300
200
100
0
1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00
Std. Dev = .70
Mean = 4.15
N = 1435.00
Communication & Coordination (6mo)


Recognize Stress Effects (6mo)
Frequency
500
400
300
200
100
0
1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00
Std. Dev = .93
Mean = 2.84
N = 1442.00
Recognize Stress Effects (6mo)


Assertiveness (6mo)
300
200
100
0
Frequency
1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00
Std. Dev = 1.12
Mean = 3.07
N = 1458.00
Assertiveness (6mo)


Group Goal Attainment (6mo)
400
300
200
100
0
Frequency
1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00
Std. Dev = .90
Mean = 3.07
N = 1436.00
Group Goal Attainment (6mo)


Safety Climate (6mo)
400
300
200
100
0
Frequency
1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00
Std. Dev = .90
Mean = 3.66
N = 1362.00
Safety Climate (6mo)


Share Command Responsibility (6mo)
400
300
200
100
0
Frequency
1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00
Std. Dev = .84
Mean = 3.18
N = 1438.00
Share Command Responsibility (6mo)